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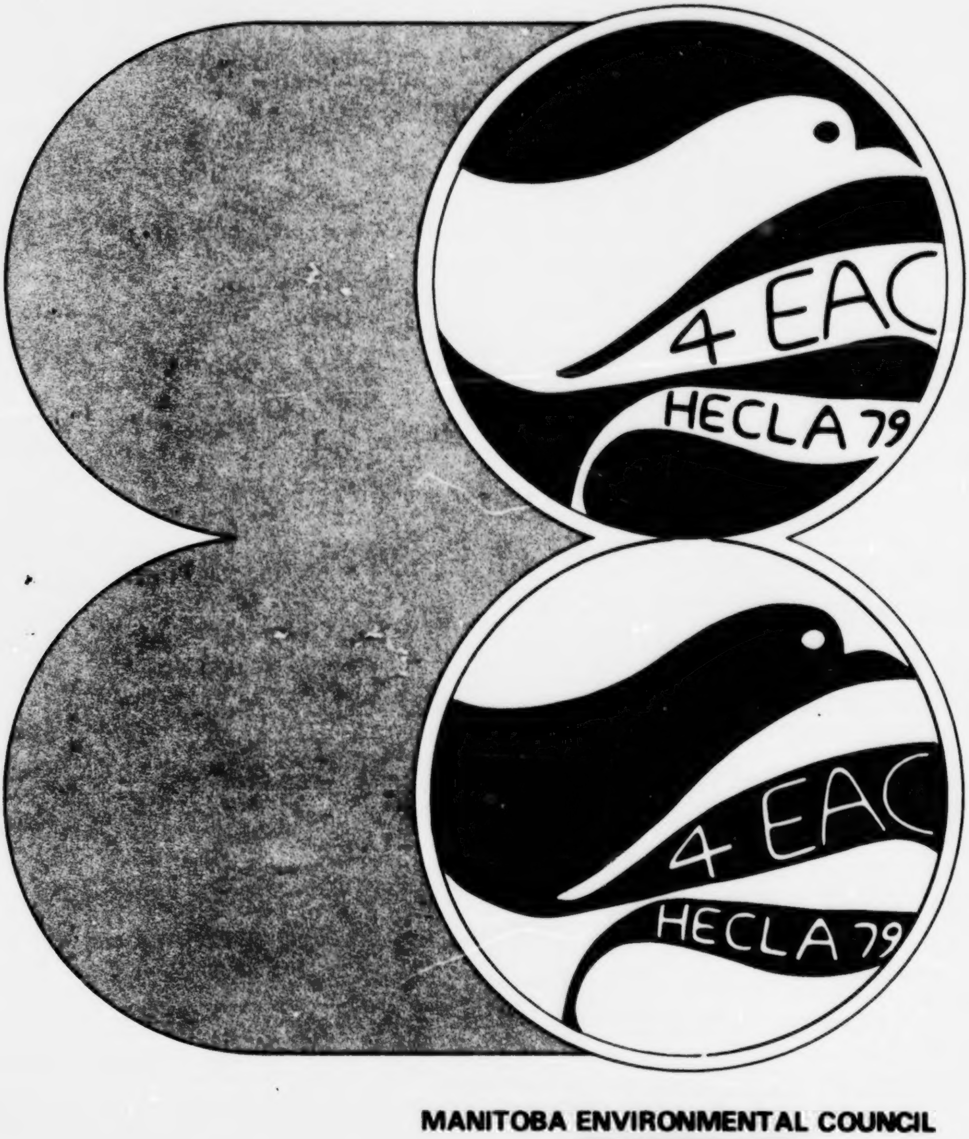
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MANITOBA ENVIRONMENTAL COUNCIL

Manitoba Environmental Council *Box 139, 139 Tuxedo Avenue, Winnipeg, Manitoba R3N 0H6*

Our file: 618.6.11(AN)

The Honourable Gary A. Filmon,
Minister of Consumer and Corporate
Affairs and Environment,
357 Legislative Building,
Winnipeg, Manitoba.
R3C 0V8

Dear Mr. Filmon:

I have the honour to present herewith, Annual Report Eight, of your Council.

This report details the Council's activities during the fiscal year ending March 31, 1980 and includes information regarding the Annual Meeting held on May 2, 1980.

Yours sincerely,

Basil Ratoff,
Chairman.

JJK/bjd

Enclosure (1)

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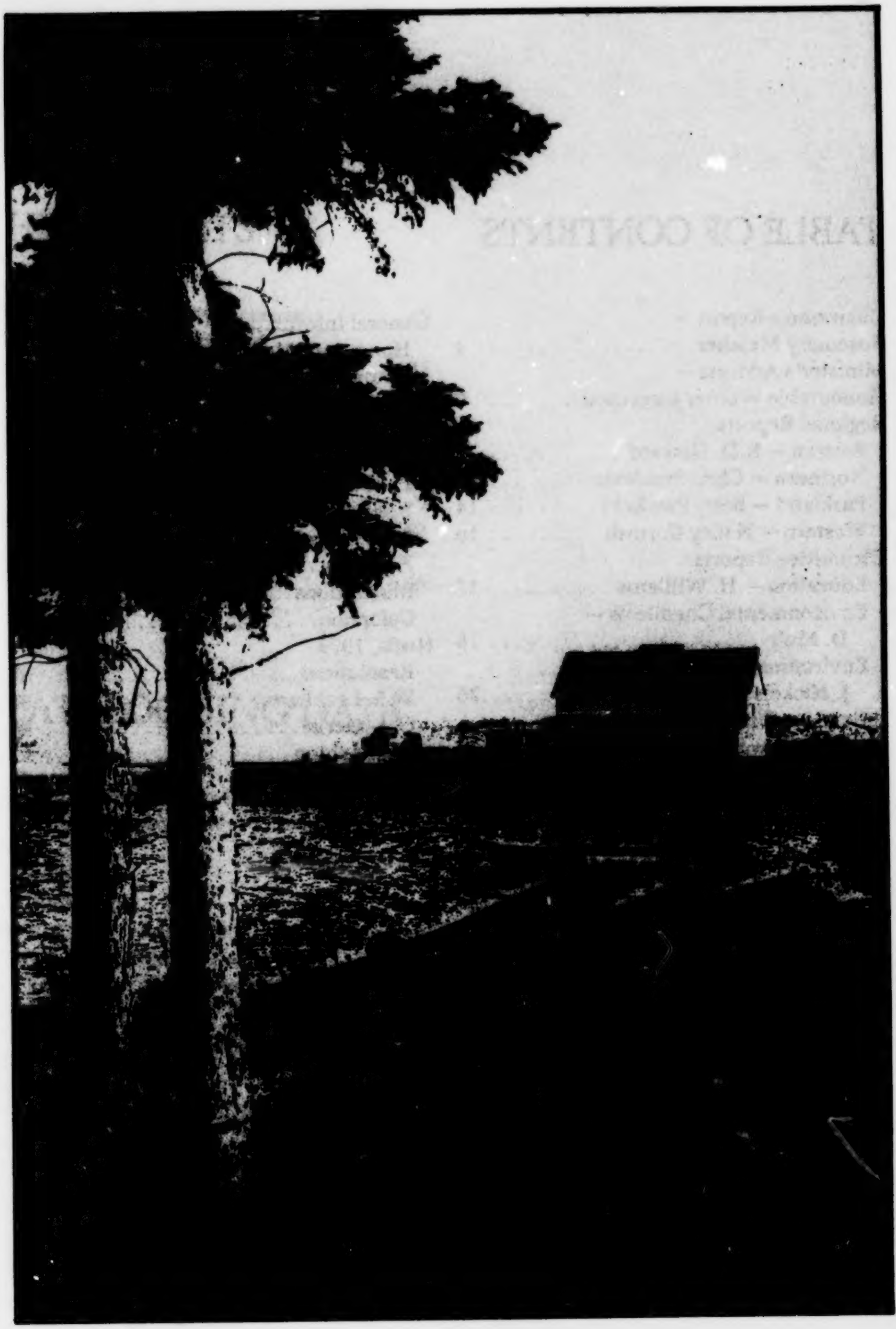

CHAIRMAN'S REPORT—ROSEMARY MALAHER

It is with regret that I mention that as of November 16, we have a new Minister, the Honourable Warner Jorgenson, who is also Minister of Consumer and Corporation Affairs. I say "regret" because there is always a loss of time and a need to re-establish a working relationship and also because Mr. Ransom had a background in resources management which led us to the feeling that our briefs were reaching a sympathetic ear, an ally rather than an adversary. We are hopeful that the same sort of arrangements will be worked out with Mr. Jorgenson. Unfortunately, he had a previous engagement for this afternoon and is unable to welcome our guests to the forum. They will be welcomed by the new Deputy Minister, Mr. Mason.

In my report I do not wish to preempt the information on activities reported by chairmen of various committees. However, there are a few general comments which I would like to make on the overall functioning of the Council.

This has been a very busy year, particularly during the month of May, as Onno Kremers and other members of the planning committee prepared for the Joint Environmental Advisory Councils Meeting which we hosted at Gull Harbour. We owe a great deal of thanks to this group who arranged for the speakers, the general format, the accomodation and meals, the excellent publicity and the secretariat. Thanks are also extended to the Province for its hospitality and to several past Chairmen of Council who acted as the chairmen of the various sessions. The delegates enjoyed the conference; they found the discussions worthwhile. I received several very kind letters of thanks from them when they returned home.

Some Council members attended part or all of the conference and benefitted from the information and the contact with the other Councils' representatives from across Canada. These are always part of the value of hosting a national meeting. The conference did, however, consume the "discretionary" portion of the budget for this year, and therefore precluded any plans that we may have had to hold a Council meeting somewhere other than Winnipeg. This decision was made by the Board at the very beginning of the year, when the plans for the conference were proposed for Board approval.

The Hecla Conference concentrated on two issues — Hazardous Chemicals and Hydro-electric Power. The format was generally quite successful with technical presentations mixed with workshop sessions. This focussed our thinking on those issues which were national in scope. Since the workshops were on hazardous chemicals and since all provinces had prepared an introductory paper on the state of hazardous chemicals in their own jurisdictions, the resolutions which resulted all dealt with various aspects of this problem. Education of toxicologists and eco-

toxicologists, transportation of hazardous chemicals, regulations regarding the introduction of new chemicals, were some of the subjects included in the resolutions. These have been turned over to the Environmental Chemicals Committee for their recommendations regarding our action.

The conference setting was idyllic since it provided isolation, recreation and a satisfactory bill of fare. The Parks Branch presented an excellent slide show on Hecla Park. The early morning bird watchers were treated to sights of families of Canada Geese, innumerable types of ducks and even a glimpse of the famed Western Grebe. The excitement at the conference was the announcement of the new Conservative Cabinet, which we thought would be on TV during one of our coffee breaks. Due to a mix-up in the translation of the time zones, we all had our attention rivetted on the opening segment of *As the World Turns.*
The minutes of the conferences are not yet circulated, although we expect them soon. Conferences like this produce incredible amounts of paper, in which some of you may have some interest. This has been a "colour commentator's" report of the conference. It was a privilege to act as the hostess for this group and I thank you for the opportunity which you gave me to attend as your delegate.

For the most part I have been very pleased with the attendance at Board meetings. Several regional representatives have been attending regularly. As a result, technical committee chairmen have been made aware of some regional problems. This is the kind of liaison which is most beneficial to the functioning of the Council.

Much discussion took place at the Board level over the form of our participation in the Garrison Diversion issue. Although our sympathy and moral support were offered to the new group, *Action Committee on the Garrison Diversion,* the Board felt that our role as a federation and as advisor to the Manitoba Minister of the Environment did not allow us to become members of the *Action Committee* ... A brief and its accompanying material is part of that moral support. All material compiled by the Council in previous years has been put at their disposal. We commend the efforts of Rick Howard, Bill Aitken, Colin Holbrow and others and wish them every success.

One publication project which we had planned to undertake, the printing of the South Indian Lake proceedings, will not be completed this year. We will instead be transferring some of the funds which will not be expended on publications to the membership committee. You will be hearing of the plans of this committee from Mr. Palamarchuk.

During November the Clean Environment Commission held hearings on the proposed quality standards for the Souris River. The public announcements of this meeting were issued, giving only one month to prepare briefs. The relevant reports on the Department's proposals for the quality of the Souris were not available until two weeks before the public meeting. Our Water and Waste Committee was, by that time, engaged in other matters, as you will see by the briefs presented by them to this meeting. This is the first of a series of hearings on the river basins in Manitoba. It was thought advisable, rather than merely having the Chairman write a letter to the Chairman of the Commission, that we form our suggestions for the proper handling of future hearings of this nature into a brief which would have the approval of the Council. One scant month does not allow sufficient time for a volunteer organization to prepare a response to this type of a proposal, nor does the very tardy printing of the background material make any worthwhile contribution to the value of the public hearing. Our Western Region Representative, Nancy Cornish, was able to attend these hearings and she may be making some comment on them.

Much discussion has taken place at the Executive over food allowance for Council members who must travel to meetings. After much correspondence it has been established that we must adhere to the Government guidelines which have not been amended for two years.

We were not satisfied with the attendance at the initial meeting of all technical committees held in Bldg. 2. Very often new members of Council attend but continuing members do not. This meeting is meant to be the kick off for committee work for the year and it is always hoped that business can be commenced. Although some worthwhile discussion did take place, as you would expect when Council members get together, it would have been much more satisfactory if more of you had been there. It was suggested that next year this be treated as more of a committee meeting and the technical committee Chairmen contact their members in an attempt to solicit a greater attendance.

The executive announces three appointments; Jim Nickel is chairmen of the Task Force on Environmental Quality and Dave Punter has agreed to chair an Ad Hoc committee which will respond to the changes in the Clean Environment Act which may come before the upcoming session of the legislature. The other members of this committee are Bill Turnock and Peter Aitchison. Lewis McCall has been appointed chairman of the Energy Committee. Two jobs have applied for under the S.T.E.P. program carried on within the government. One would be for editorial assistance and the other would assist with the Environmental Quality questionnaire.

Some excellent work has been done by the technical committees during this first part of the yar. The briefs bear witness to the activity of some of the committees. Others have been active but have not prepared briefs for this meeting and there are some, I'm afraid, where there has been no activity at all. The Executive will do its part to see that these groups get underway in the new year but the responsibility is not ours alone. We would like most of the Council members to act on one of the Committees and contribute to the overall effort which ultimately will make for an effective Council.

I would like to thank the office staff and J.J. Keleher for the extra work that has been done to prepare for this day. The forum on Red River Flooding has required a great deal of additional attention because of the features, aside from the speakers, that will be presented this afternoon. Forum kits have been prepared for all registrants. The film, slide show and the photographic exhibition will also add a great deal to the scope of the presentations, so that much behind the scenes work has gone into preparations for the day.

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Presented at Nov. 30, 1979 meeting.

CHAIRMAN'S REPORT — ROSEMARY MALAHER

My year began immediately following the Annual Meeting in April 1979, with total immersion into the activities for the joint meeting of the Environmental Advisory Councils, held at Hecla June 4th to 6th. I made some brief remarks about this conference at our fall meeting. I would like to repeat here that Council is very grateful for the time and effort that members of that committee put into making the event a very successful one. Since we have now received the full minutes and report, we will be hearing from Onno Kremers who was chairman of the organizing committee for the conference. The major topic chosen for that conference was one which has received a great deal of publicity — that of hazardous chemicals. Two major rail disasters involving chemicals have focussed the attention of the general public and hence the government on these problems.

A meeting of the Environment Ministers also dealt with disposal of hazardous chemicals. It is for these reasons, as well as a direct request from our Minister Mr. Jorgenson for assistance in educating the public with regard to disposal, that we have instructed the Environmental Chemicals Committee to plan for a forum on this topic for our fall meeting in 1980. This will carry on the education process which was begun at Hecla.

Although the various environmental councils work in many different ways, it is valuable for all to come together to gain a national perspective. While many problems seem local and specific in one province, it may only be a matter of emphasis. The meeting this year is to be held at St. Andrews-by-the-Sea, New Brunswick. I envy the delegates because of the fine historic buildings which are found in that community.

The subjects chosen this year are land use practices, shore zone management, acid rain, and a specific local problem, environmental impact of the Eastport, Maine refinery. It is likely not that dissimilar to our problem here with the Garrison Diversion in that an action in the States is having an impact in Canada. It would be ideal to send several delegates, presumably the Chairman, Executive Secretary, and a member of an appropriate technical committee. The incoming Board will have to deliberate on this, in light of the necessary budgetary restrictions for 1980/81, on which I will be reporting later.

At the beginning of the year, members of the old and new executive met to ensure a smooth transition from one administration to the next. Including this meeting, the Executive met 10 times and the Board met 8 times. This year we have had excellent attendance from regional representatives. As a result there has been a constant introduction of issues into the technical committees. Perhaps there was more material introduced than it was physically possible to study. Ideally this is the way the Board was designed to function. With the finances as slim as they are at present, there seems little likelihood of the Board meeting outside Winnipeg in the next year.

The Vice-Chairman has taken a leading role in liaison with the technical committee. Basil Rotoff contacted the chairmen at the beginning of the year and has continued recruiting when necessary. We were pleased to welcome to the March Board meeting, Dr. Harvey Williams, the new Chairman of the Education Committee. We hope that this committee will begin to function after a lapse of over a year.

The Secretary, Denis Ringland, has had a very busy year. Board meetings have been rather long and wide-ranging in the subject matter. Denis has, generally speaking, taped the proceedings of the meetings, which has resulted in a minimum of delay in the minutes.

As I reviewed the Chairman's Report from one year ago, some items should receive comment here. One of these is the Bylaws. Following the revision done at the last Annual Meeting, they were sent to the Minister for comment. The Bylaws Committee is now going to consider the responses from the Department and may have one or two further amendments to propose during the coming year.

As a result of the all-too-obvious intrusion of the television cameras at our fall meeting, the Board approved some guidelines for the conduct of Council meetings. It seemed wise to have them in writing since there are many things on the Chairman's mind the day of the meeting. Some pre-determined policies can be of great assistance when controversy arises. I will review some of the these policies now. You will see how these impinge on what happened at the fall meeting.

The first of these is that the full text of briefs shall be distributed only to Council members and advisors prior to the meeting. The media may be advised of the subject matters of the briefs to be presented.

Second, during the business meeting the public and news media are permitted to attend as observers. Only members shall speak in debate with the exception of technical advisors to committees.

Third, those present should be reminded by the Chairman that only members are eligible to vote.

Fourth, non-members presenting comments or requests for action on environmental matters may do so at the end of the Council business. These matters may be referred to technical committees for their recommendation. These presentations shall be subject to the time constraints of the meeting.

Fifth, non-members may comment on Council positions as adopted, after Council business has been completed, providing time permits. The operative word is "after" Council business has been completed.

Sixth, the normal press table should be provided for the use of media reporters. The Chairman will be responsible for regulating the activities of photographers and TV cameramen during the meeting.

The Executive held a meeting with Mr. Jorgenson in February. This was our first representation directly to him since the environmental portfolio was transferred. Several of the Council's concerns were discussed. I will list those here now.

1. The Garrison Diversion Unit, stressing the necessity of continuing the negotiations with the United States government.
2. Further flooding due to the increased Manitoba Hydro development in the north.
3. The tourist development on Shoal Lake, Lake of the Woods, with its potential effect on the City of Winnipeg water supply.
4. The purpose and method of the

survey on environmental quality.

5. The Council budget for 1980-81 which does not allow for any increase in expenditure.
6. A misunderstanding within the Department over Council representatives nominated by member organizations. This last problem was quickly solved with the agreement of the Minister. Organizational representatives still do not have to be approved by our Board but can be referred directly to the Minister for approval. The budget problem is still with us but we have some grounds for believing the Minister is receptive to our request to allow us the same 5% inflation increase granted other Departmental groups.

Council expressed its concern about the short time allowed to respond to the request by the Clean Environment Commission for briefs on Manitoba watersheds and about the lack of availability of resource material. The Minister replied that our requests were reasonable and forwarded our comments to the Commission. They are to be taken into consideration for the next hearing. This is particularly important since the next watershed to be classified is the Red River System.

At present the Transport Commission is making an inquiry into the vinylchloride spill at MacGregor. Since these are lengthy hearings, it was impossible for the Council to take on an intervenor status. Some members have been attending these hearings as they are able. The Environmental Chemicals Chairman may have further comments on this matter later.

We have been fortunate in receiving a grant for one student during the coming summer. This will mean that the editing of the publications will receive a needed boost and will put pressure on the budget. In any case, the materials will be ready for publication as funds allow.

It was rewarding to be able to display the environmental cartoons in Brandon as well as in Winnipeg during February. Hopefully the collection can move on to Thompson during the next year.

One issue which was very much before us during the year was that of the Garrison Diversion. Our position as adviser to the Minister puts us in a rather delicate position with regard to the Action Committee Against Garrison. We have attempted to play an informational role. We have sent all our past publications on Garrison to the Action Committee and we have received with great interest the reports from Mr. Howard on the events that have been taking place in Washington, D.C. We specifically asked him to inform you today on some of the major facets of the committee's campaign. This is certainly a vital issue to Manitoba.

I have mentioned the activity and the support given to me by the other members of the Executive. My most sincere thanks on behalf of the Council goes to them for conscientiously carrying out their duties during the year. I would also like to thank the Committee Chairmen, who have found the time to prepare briefs for our consideration. We all gain from the research and expertise that the committees put into these presentations. It is, to my way of thinking, one of the most valuable aspects of these meetings. These matters require our thought and careful scrutiny since we are required to decide whether or not to endorse each proposal. The necessity of voting focusses the mind and requires realistic appraisal. We can always improve the participation in the work of the committees, as this is where the basic activity of Council takes place. Several committees could be more active next year. We look forward to the broader scope that this will provide.

Partly because of my involvement with the environment and with the

Manitoba Environmental Council, the Junior League of Winnipeg has nominated me as one of the nominees, not a winner, of the Women of the Year Award for the Young Women's Christian Association. I certainly don't expect to win it but I think it's a nice recognition of community service.

I have enjoyed my association with the Council this year. I hope to continue to serve in the years to come. Thank you very much for the privilege of serving as your Chairman.

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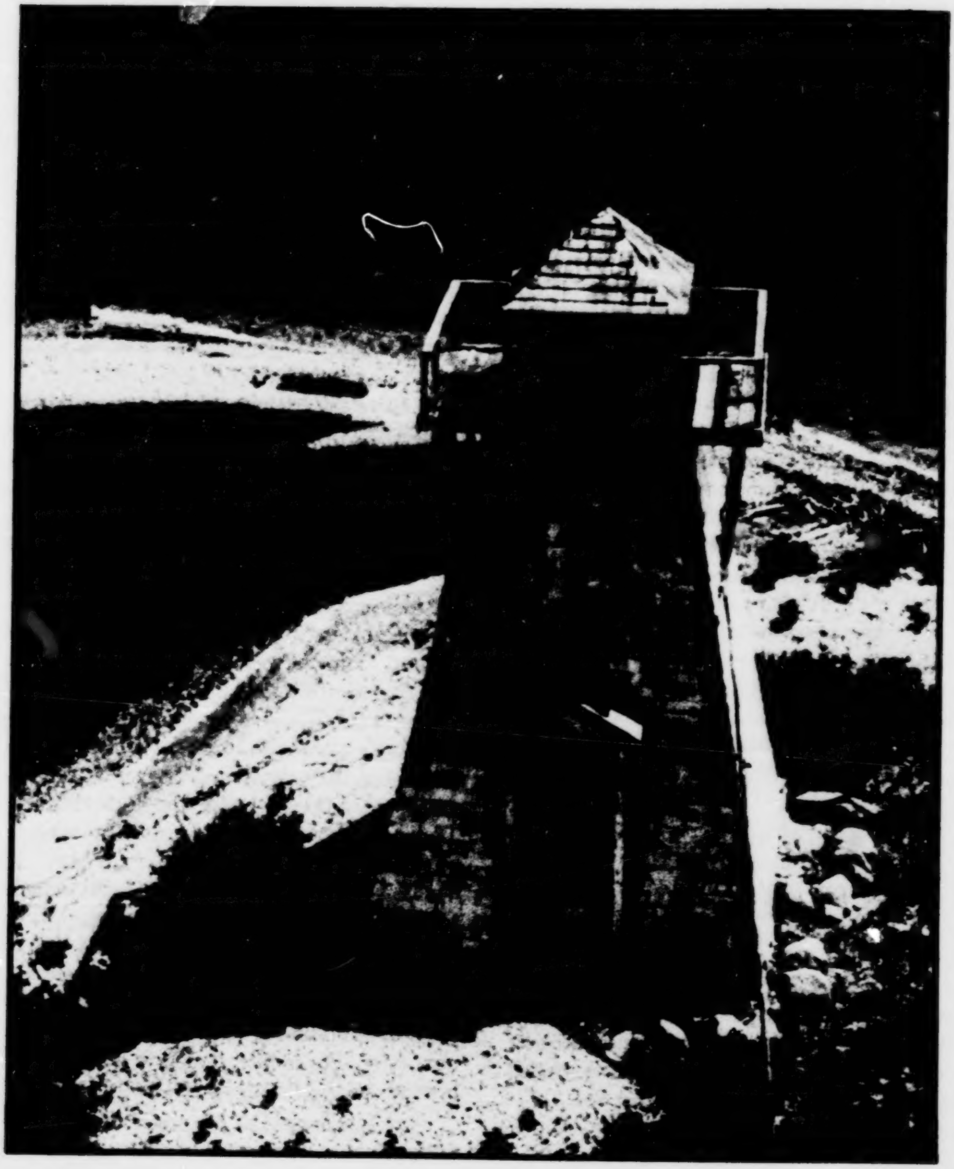
Presented at May 2, 1980 meeting.



MINISTER'S ADDRESS — HON. WARNER H. JORGENSON

On your program, you have noted that at this time the Minister of the Council, the Hon. Warner Jorgenson, was to be present to give his remarks at this Annual Meeting. The Minister kindly accepted the invitation with one qualification. As was already mentioned, he is in estimates today and cannot be here. The Minister has asked me, as his Executive Assistant, to convey to you the following message.

It is unfortunate for me that I am unable to be with you in person today. I do wish, however, to share with you a few of my thoughts and observations in respect of environmental matters.

I am aware that some people had some concerns about the placing of the environment section with that of Consumer and Corporate Affairs, when it was announced last fall that certain Cabinet positions had been reshuffled. My colleague and predecessor responsible for the environment — the Hon. A. Brian Ransom, had had, prior to the shuffle, a large department consisting of three separate groups — Natural Resources, Mines and Environment. With the appointment of Mr. Ransom as Chairman of Treasury Board, Premier Lyon felt that this added burden would be too onerous for one Minister. As you know, Mines was combined with Energy and placed in a new department under the guidance of the Hon. Dick Craik. Environment was transferred to my existing portfolio of Consumer and Corporate Affairs.

The area of Consumer and Corporate Affairs concerns itself with the living standards and legal rights of Manitobans — individually and collectively. Environmental Management has a similar thrust in that it is there to correct adverse environmental conditions for all Manitobans, and preserve the environment for future generations.

I wish to assure you that there will be no diminishment of the overall thrust of the environmental matters that the Hon. A. Brian Ransom established. It is apparent that environmental concerns can be classified into two categories. First there are the environmental problems which have been created by the processes, products and procedures that have been used in the past to the detriment of Manitoba's environment. The second concern deals with striving to assess new technology, new products, new processes and new plants, which our rapidly changing society develops, in order to avoid future detrimental impact on the environment and therefore our lives.

Bearing in mind our environmental history and keeping the future in sight, the immediate efforts of my Ministry will be to urgently deal with waste disposal programs, the transportation of hazardous goods, and industrial emissions. Under waste disposal programs, there are two separate categories which must be dealt with; municipal waste disposal by private individuals and commercial companies, and the disposal of hazardous goods generated commercially and industrially. With regard to hazardous goods, we are co-ordinating our efforts with our sister Provinces and with the Federal Government, in order to establish guidelines in how to deal with dangerous wastes and dangerous products which are being used in industrial processing. To this end, we have urged the Federal Government to re-introduce an Act, similar to the one which was introduced by the previous federal administration, dealing with the transportation of hazardous goods.

I am fully aware, and again would like to state publicly here, that I am persuaded that the objectives of environmental management cannot be achieved by the three levels of government alone. Rather, it requires co-ordinated approach by individuals, corporations, academics and government.

We appreciate the role that the Council is playing in bringing the capabilities and concerns of individuals, associations and academics towards this end. I wish you continued success.

***

Presented at May 2, 1980 meeting

EASTERN — R.D. HOWARD

The Spruce Budworm infestation of jack pine and spruce along the Winnipeg River and in Nopoming Park is running rampant. I believe they've been spraying in New Brunswick for 28 years and that hasn't resolved anything. The spraying in Manitoba covers merely a 200 acre campground situation.

The tent caterpillar problems now seem to be in control. The report is that the egg counts are low. Where I live on the Agassiz Forest Reserve, we have great big dumb, stupid flies around, so I guess they are doing their job. Nature is taking care of it.

The elm trees along the river systems in eastern Manitoba — the Rosseau, Rat, Brokenhead, Cooks Creek, Whitemouth, as well as shelter belts, will likely be wiped out by Dutch Elm Disease. There will be a sanitary belt, if I can use that term, around Winnipeg, where there will be surveillance pruning and cutting. They probably will have a replanting program because there's a new Act in process. Its remedial effects will of course depend upon the regulations pursuant to it. They hope to protect trees inside the City of Winnipeg. The cost of immunization by injection is about $50.00 per tree. This would be too expensive to use for shelter belt trees.

The smoke problem on burning peat and farm fields has been discussed at great length in the past. The 1976 Order was rescinded in 1977. We are back to the wooded district regulations of ancient history. One of the things that I'm pleased to report to Council is that under the Agro-Man agreement, the Eastman Regional Development Corporation has the initial phase of a $650,000 contract to provide alternative methods of utilizing organic soils.

Because of the cooperation that's occurring with the District Planning Act staff, recreation and resort cottage effluent contamination are now becoming capable of resolution. I think that the very positive influence of the Planning Act should be acknowledged by Council.

If you don't know what the fish and wildlife resources are, I don't think you really have the capability of managing them. I find that in northern lodges and outcamps, the quantity of wildlife is not known so that there is an obvious lack of capability to deal with their management.

There is a disgraceful lack of sanitary facilities within provincial parks. Anybody that's been up to Thompson must, of necessity, agree with me. That's not the only place where it's horrendous.

The new Abitibi forest agreement with the Province of Manitoba, which runs until the year 2000, bears watching. After long negotiation, the Province of Ontario has agreed with Abitibi on a 10 year reforestation program. If I understand the present arrangement with Manitoba correctly, some parts of the contract need examination.

* * *

Presented at May 2, 1980 meeting.

NORTHERN — C. SUNDEVIC

At the outset I would like to thank the Council for providing me with the opportunity of serving as its Northern Regional Chairman. From this position I've noted that much hard work lies ahead for all of us. We need to increase our number of active members, we need to inform and promote our role publically, and we need a budget increase, thereby allowing us to carry out activities which will in turn benefit everyone.

Last June I responded to a proposed lagoon expansion of the sewage system at Paint Lake. As Liz Lake is intended to receive the waste from lagoons, I proposed that a pre-installation monitoring program of Liz Lake be adopted and that the monitoring of the lake be continued on a yearly basis.

The Hudson Bay Mining and Smelting Company has been opening up new mines at Osborne Lake, Chisel Lake, Crows Lake and Spruce Point. Representations to the Clean Environment Commission were made to find out the rate and levels of discharge of effluent into our environment from these mines. I've just visited Flin Flon and was appalled by the amount of pollutants being emitted by the HBM&S smoke stack. I was told the daily effluent emitted from that complex is 1,000,300 lbs. of sulphur dioxide and 2,970 lbs. of lead, plus other heavy metal contaminants. Further to this, HBM&S in Flin Flon is to have a hearing on the smoke stack effluents on May 20th, 1980. HBM&S has been issued guidelines by the Clean Environment Commission for the discharge of waste material for two mines — the Centennial Mine and the Westarm Mine.

It appears as though thermal fogging is still used for the control of mosquitoes and black flies. Because of the abundance of breeding grounds in the north I am convinced that this is both a useless and expensive method. On September 4th, 1979, the CEC issued Manitoba Hydro and Jenpeg the right to spraying insecticide, **Methoxychlor** for the control of mosquitoes and black flies.

Due to our Council's limited budget, some suggested activities had to be postponed. One was a proposed showing of cartoon contest entries in the north, which could have increased the number of northern participants, expanded awareness of our environment, and extended knowledge of our Council's existence. Another proposal dealt with northern environmental concerns. I proposed evening meetings in The Pas, Flin Flon and Thompson. One half of the program would have been a presentation of selected environmental topics, while the second half would have been devoted to receiving environmental concerns from the audience.

The publication of the South Indian Lake meeting is of importance to us. It would have brought to our attention the effects of Hydro's Nelson/Churchill River Diversion project. Unfortunately it was also postponed.

We are also faced in the north with the problem of hazardous material, its use, transportation and disposal. People should be made more aware of what actually happens to all the chemicals, drugs, acids, oils, and the rest of the products used by hospitals, gas stations, mining companies, and us as individuals. Recent happenings include two leaks from railway tank cars, one in Churchill containing chlorine and the other in The Pas containing small amounts of hydrogen sulphide. Because of lack of facilities in Canada for disposal of PCB's, Inco Metals Company of Thompson is storing PCB's in steel drums at an unused mine site approximately 50 miles from Thompson.

Some of the concerns for next year's chairman might be listed: 1. The side effects caused by spraying of roadsides to control shrubs and grass. 2. The development of additional dams by Manitoba Hydo on the Burntwood River System. 3. The transportation of hazardous material and method of disposal. 4. The effects of Hydro's Churchill/Nelson River Diversion project on siltation in lakes and rivers and the status of the commercial fishery. 5. The mercury level of South Indian Lake and Red River should be monitored and the reason for its sudden rise should be investigated. 6. I recently heard that there is to be a transmission line built to Churchill from Gillam. The effects this might have on the animals i.e. the caribou herd of that area should be investigated. The disruption of the permafrost layer should also be considered. 7. PCB's are being used in Hydro converter stations and in transformers at Inco. A check should be made of the safety procedures pertaining to their use, the levels of contamination and methods of safe storage and disposal. 8. The effects of acid rain should also be investigated, as it pertains to the emissions of sulphur dioxide emitted from Inco's Thompson complex and Flin Flon's HBM&S. 9. As a final note, there are a lot of grass and field fires lately. In April I was driving north of Winnipeg where there were many fires that could be spotted along the ditches, fields and forested areas of the land. Now I feel that greater control should be taken. Many trees are needlessly burnt and many birds' nests and animals are destroyed in this way. A Nova Scotian article stated that fires usually kill off the good grass and let the tough weeds survive. Hot fires can destroy vital organic material in the upper level of the soils.

As one can see, there are many environmental issues in the North. I hope that the Council can do its part in resolving them.

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Presented at May 2, 1980 meeting.

PARKLAND — BETTY PAWLICKI

Many environmental concerns have arisen in the Parkland Region in the past year. Some of these are ongoing such as the management and utilization of Crown lands. Questions have also been expressed regarding government policy on timber permits and reforestation.

The main problem of Parkland residents focusses on possible deterioration of water quality in their lakes and rivers. The **Save the Shell** group worked hard to prevent the Town of Roblin from using the Shell River to dump effluent from the proposed lagoon extension. Local farmers wish to use the sewage effluent as a fertilizer on their fields. The **Save the Shell** organization has been pressing government to have this disposal method recognized as a solution to save the Shell River from further pollution.

A similar complaint has arisen in the Grandview area where the Village is proposing an extension to their lagoon. The Valley River is used for the effluent at present not only from the Village but from a large hog operation. A group is organizing a campaign modelled on the **Save the Shell** organization and is seeking to have the effluent used as fertilizer.

Still another group of concerned citizens is working on finding a solution to the siltation problems facing Lake Dauphin. This has become quite serious over the past years and it's become a major concern. The lake is no longer even useable as a commercial fishery. It's too shallow.

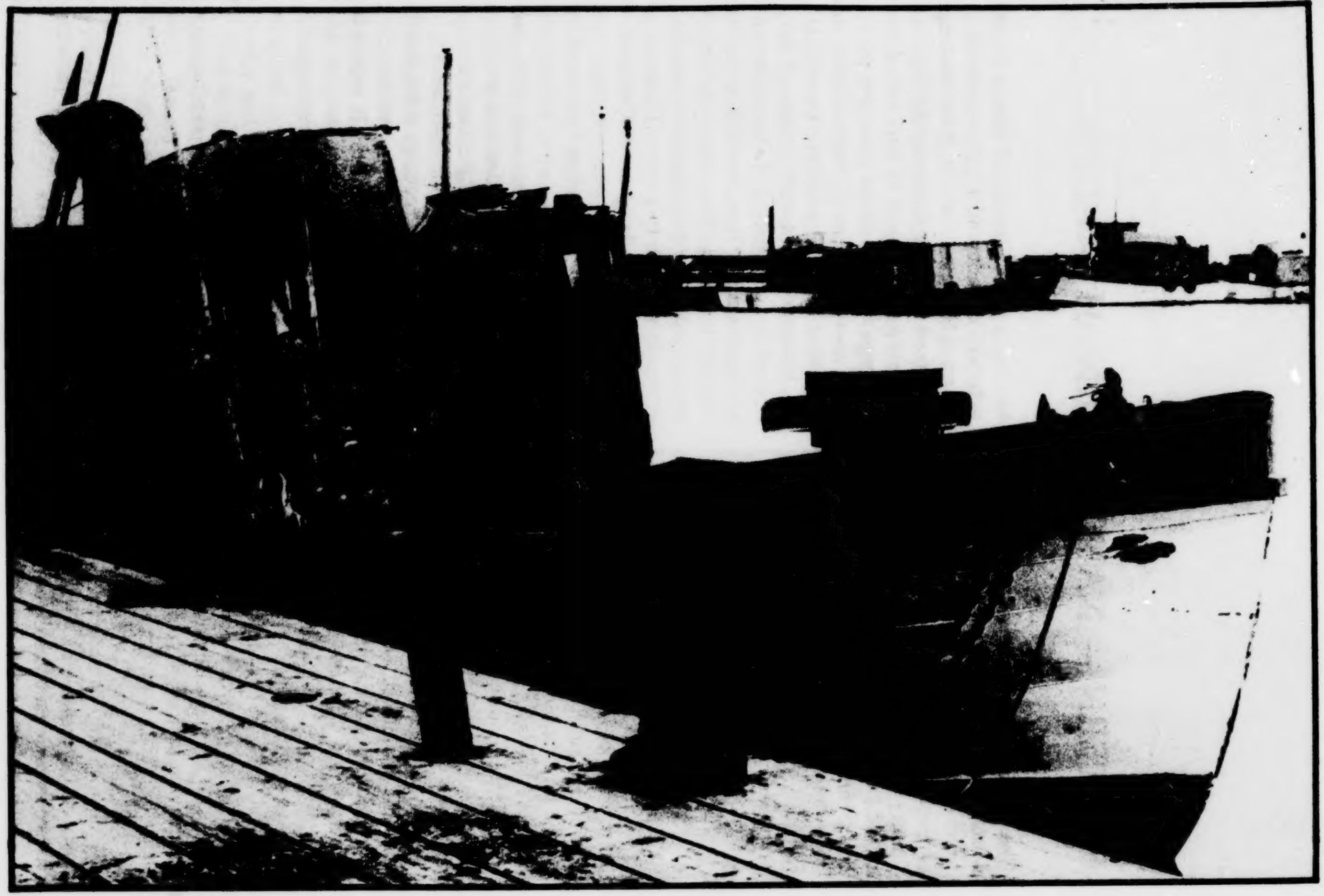
In all the major lakes of the area, Winnipegosis, Manitoba, Dauphin, Pelican and Swan, the Garrison Diversion project still figures as a major threat to water quality. Commercial fishermen on these lakes are worried about the effects on their industry should any exotic species be introduced. The lakes are also a recreational resource in this area.

Transportation of hazardous chemicals is another major issue. At a meeting of the Manitoba Association of Urban Municipalities in Dauphin many municipal officials stated that they were trying to cope with a problem beyond their resources in the event of an accident or spill. Local volunteer fire fighters lack expertise and equipment to cope with the many types of chemicals they might be called upon to deal with. The Town of Dauphin has a special worry as the main highways pass through the center of the Town. There is no bypass whatsoever.

At the same meeting support for the government land use policies was expressed. It was felt that these policies provided a sound guide for the proper utilization of land resources and for municipal planning.

* * *

Presented at May 2, 1980 meeting.



WESTERN — NANCY CORNISH

The Souris River Basin in southwesten Manitoba was the first of 19 watersheds to be studied by the Clean Environment Commission with regard to surface water quality objectives and stream classification. The purpose would be to relate the water quality of a particular water basin to a generalized scheme, formulated by the Environmental Management Division for all waters of the Province. The generalized scheme itself was adopted as a result of Commission hearings which were reviewed in its report dated May, 1979.

The Commission scheduled public hearings on November 5 and 12, 1979 at Melita and Souris respectively. A report by the Environmental Management Division on water quality in the basin was released to the public on October 25. The Council's Water and Waste Committee deferred preparation of a brief because of the lack of sufficient lead time. Later it issued a brief requesting that the Commission defer future hearings until after the information report had been distributed for 2 months. This was adopted by the Council at its November 30, 1979 meeting.

The hearings were notable for the scarcity of participation from the public and private sectors. This probably was because the river system had been subject of a Federal/Provincial Committee investigation and is a component in the Garrison Diversion Unit project which has received considerable publicity.

Each stream in the Souris River basin has many uses. Equality of uses is a key policy of the adopted water classification scheme. However, no one at the hearings disagreed with the statement by the Manitoba Department of Agriculture that the main function of the river was to carry away excess precipitation from improved lands. The views expressed at the hearings provided statements of the current situation rather than any attempt at improvement. Two possibilities for the degradation of water quality were mentioned at the hearings. One was the return flows from irrigation of farms within the Souris Loop of the Garrison Diversion Project. Another was the irrigation of dry lands of the basin within Manitoba.

In a report dated February, 1980, the Commission recommended that the existing classification of the basin be adopted subject to a review within 3 years or less. It also recommended that criteria for phosphorous content be developed as none were now in existence and that minimum flow patterns for the November - May periods be developed.

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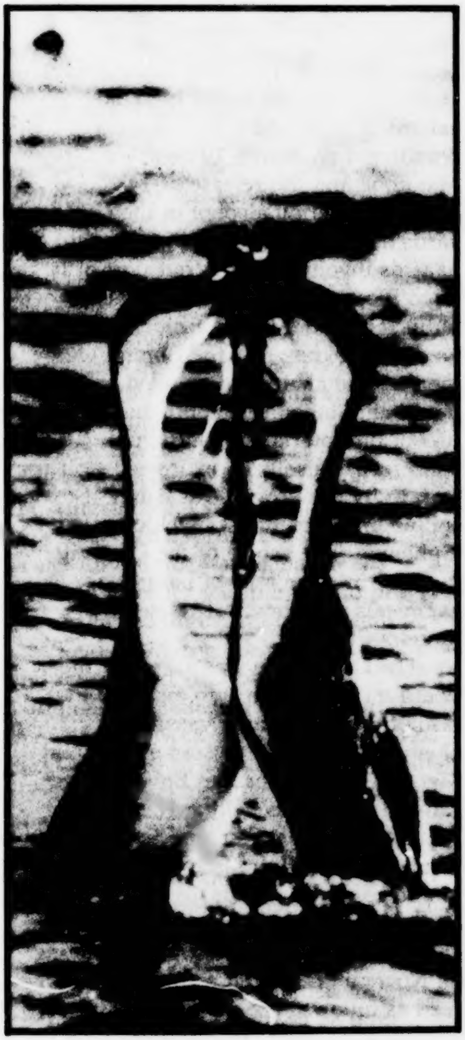
Received for publication, September 18, 1980.

EDUCATION — H. WILLIAMS



The Education Committee resumed activity in March, after a long period of inactivity, with a new Chairman, myself, Harvey Williams. Although there was insufficient time to complete the research necessary for the submission of briefs at this Annual Meeting, the committee identified several subjects for possible briefs during the forthcoming year. These subjects are now outlined.

The need and supply of Manitoba-oriented environmental education materials in a convenient form for teacher use is to be examined. A comprehensive review of available, Manitoba-oriented, environmental education resources is also planned. An enlargement of the role of the Winnipeg zoo in environmental interpretation, and possible environmental education sites in Manitoba parks will be considered.

A review of the information bulletins published by the Environmental Management Division was begun to determine if the information contained in them is up-to-date. Authors and appropriate agencies are being contacted and asked to examine the pamphlets for accuracy and current validity.

Members of the Committee are: Chairman, Harvey Williams, Karen Stonyk, Harold Driedger, Alan Beaven, Wayne Neilly and Ron Phillips. The Committee now has a nucleus of active members and looks forward to a productive next year.

* * *

Presented at May 2, 1980 meeting.

ENVIRONMENTAL CHEMICALS — D. MUIR

The attention of the media and consequently the public has focussed on recent accidents involving hazardous chemicals. The discharge of 12,000 gallons of vinyl chloride in a train derailment on March 10 near MacGregor, Manitoba and the release of 14,000 gallons of methyl alcohol in the CPR yards in Winnipeg on April 6 brought the hazards involved in the transport of large quantities of dangerous chemicals to public attention. Other accidents that were made known to the Committee by the regional chairman included spills of liquid ammonia in Dauphin and diesel fuel in the Interlake region. Public concern has also been expressed over the storage by the Province at Gimli of toxic compounds including polychlorinated biphenyls. The choice of the Committee to move into the area of hazardous chemicals and chemical wastes was therefore timely.

The Committee was asked by the Board on September 9 to evaluate the resolutions concerning hazardous chemicals that were passed at the Joint Meeting of the Canadian Environment Advisory Councils held at Hecla last June. As an initial response to these resolutions, a brief relative to the Manitoba situation was, as you are doubtlessly aware, prepared, submitted, and adopted at the fall Council Meeting on November 30. The recommendation read as follows: *The Manitoba Environmental Council recommends to its Minister that immediate steps be taken to ensure the safe collection and transport of hazardous waste chemicals, intended for disposal/storage facilities within or outside of Manitoba, in order to reduce the possibility of accidents which could have serious environmental consequences.* Six specific components were stated. I need not repeat them here because the brief was distributed and will be published in the next Annual Report. [Brief appears at end of this report — ed.]

The brief attracted media interest and was reported by both Winnipeg papers. The interest probably was connected with the derailment of tank cars containing chlorine and propane in Mississauga, Ontario and the subseqent evacuation of part of that city in November. As I have previously indicated, the brief later became relevant to events in Manitoba.

The Minister responsed to all briefs presented at the fall meeting in a letter to our Chairman dated January 7, 1980. The reply to our brief stated that *The transportation, handling, storage and disposal of hazardous chemicals is a matter of concern throughout Canada. This problem has been recognized by the Federal Government and the various Provincial Governments and several programs are underway to address the concerns.*

The Province of Manitoba is responding to these concerns in a number of ways:

A. *Maintenance of a secured hazardous chemical interim storage facility at Gimli Industrial Park.*

B. *Establishment of hazardous chemical* *expertise within the Environmental Control Branch.*

C. *Technical and financial participation with the Federal Government and the Western Provinces in a feasibility study on the establishment of hazardous waste storage, treatment and disposal facilities.*

D. *Participation in a task force established under the auspicies of the C.C.R.E.M. [Canadian Council Resource and Environment Ministers] to review the control of toxic substances.*

E. *Discussion with private enterprise (Kinetic Contaminants Co. Ltd.) re possible construction of a hazardous waste collection and transfer station in Manitoba.*

F. *The development of a 24-hour, 7 day environmental accident response program within the Environmental Control Branch.*

G. *The development of new legislation dealing with handling, storage and disposal of hazardous materials.*

H. *Co-operation with the Federal Government in the development and implementation of the "Transportation of Dangerous Goods Act."*

I wish to assure you and Council members that your recommendations will have ongoing review and appropriate actions taken as they are deemed necessary.

A joint meeting of our Environmental Chemicals and Land Use Committees was held on January 9 to consider the Hecla resolutions in greater detail. The conclusion was that we did not have enough information on the activities of the Manitoba Government concerning the management of hazardous chemicals. We sent a letter via the Chairman to the Minister, explaining the Committee's interest and including a series of questions, listed below, which we felt we needed information.

(1) *What is the provincial government policy and practice regarding disposal of PCBs since the U.S. border has been closed as of January 1, 1980?*

(2) *What is the provincial government policy regarding transport of other hazardous chemicals within the province, e.g. waste oils, solvents, etc? What form of transportation and storage is recommended to generators of such materials?*

(3) *Is the Gimli waste disposal site at full capacity? If so, what other site is being contemplated by the province?*

(4) *Is a landfill site for hazardous chemical and biological wastes currently under study in Manitoba? What criteria will be used for site selection?*

(5) *A recent study of hazardous wastes in Manitoba and other western provinces by W.L. Wardrop and Associates Ltd. had only a 20% return rate from potential generators of hazardous wastes. Is the province developing a more complete list of industries and institutions that may be hazardous waste producers including quantities and type of materials?*

(6) *What monitoring of hazardous chemicals, e.g. PCBs, fire retardants, pesticides that may have been placed in landfill sites in previous years is being carried out by the provincial government to ensure that these materials are not leaching into ground water?*

We received a prompt response from the Minister who suggested a meeting be arranged with appropriate staff members of the Environmental Management Division in order that they could provide the requested information. A meeting was held on March 7th with Dr. Webster and myself and staff of the Environmental Management Division (Dr. W. George Bowen, Messrs. G. Hawkins and C. Orcutt) in attendance. Information received at this meeting was considered at a Committee meeting on March 9. It served as a basis for the two briefs which were sent to you and which will be presented for your consideration at the conclusion of this report.

During next year (1980-81) we hope to continue to work on the hazardous chemicals issue. It seems to be quite relevant. We haven't actually forwarded the Hecla resolutions to the Minister for response. Perhaps we will continue to work on them to see if they should be brought to his attention.

As a result of a meeting of the Executive with the Minister last February, the Board decided that the 1980 fall forum would be on the subject of hazardous chemicals. A Program Commitee is being established and will begin its task immediately after this Annual Meeting. The early start augurs well for the success of the forum. Hopefully it will provide a valuable publication on this vital subject and be interesting as well.

In conclusion, I would like to thank the members of the Committee for their effort this year. Most of them were active once its size was pared down from previous years.

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Revised (Sept., 1980) presentation at May, 1980 meeting.

BRIEF RE COLLECTION AND TRANSPORT OF HAZARDOUS CHEMICALS

Recommendation

The Manitoba Environmental Council recommends to its Minister that immediate steps be taken to ensure the safe collection and transport of hazardous waste chemicals, intended for disposal/storage facilities within or outside of Manitoba, in order to reduce the possibility of accidents which could have serious environmental consequences.

Background

Safe disposal of hazardous chemical wastes in Manitoba is the responsibility of the Environmental Management Division of the Department of Consumer and Corporate Affairs and Environment. It recently established a Hazardous Waste Committee to develop a hazardous waste management system for the Province, but no report has yet been issued.

The type and quantity of hazardous wastes generated in Manitoba are tabulated in Appendix 1, taken from the 1978 inventory compiled by W.L. Wardrop and Associates Ltd. The major portion of these wastes are biodegradable provided that they are suitably diluted with solid waste at a landfill site or with sewage effluent in a sewage lagoon. Other categories on the list may contain stable, toxic compounds that should not be introduced into the soil or aquatic environment — "oil/solvents" may contain chlorinated hydrocarbon solvents; "pesticide containing wastes" including wood preservatives such as Pentox which contains traces of chlorinated bibenzodioxins; "heavy metal wastes", "tetraethyl lead"; "oil", including transformer, pump and heat exchanger oils, that may contain PCBs.

Disposal of hazardous chemicals in Manitoba involve one of several possibilities:

1. Highly toxic materials e.g. pesticides and some transfer oil are stored at the Gimli Industrial Park in two former aircraft fuel storage tanks.
2. Transport out of the Province for incineration or other disposal e.g. Manitoba Hydro transformer oils.
3. Landfill disposal — some solid wastes are disposed of in this manner.
4. Illicit dumping — liquid wastes that are not accepted by landfill sites are handled in this manner.

Although there have been several delays, a special treatment facility is currently in the final planning stages and is to be constructed by Kinetic Contaminants Canada Ltd. possibly in Alberta. It will handle many toxic material wastes and a receiving station for it is to be built in Manitoba. Assuming this facility is built, there still remains the problem of collection and transport of the hazardous waste from the originator of the material. The present policy at Gimli Industrial Park is that the transport and handling of the waste is the responsibility of the originator of the material.

This policy cannot continue if disposal in an Alberta facility becomes mandatory. Accidental spills during transport and collection of the wastes could result in contamination of soil, air or water environments. Recent examples of contamination in this region include the accidental spill of 1500 gallons of PCBs in Regina (above the city aquifer).

Furthermore, disposal of hazardous chemicals is costly. There are presently no incentives to encourage small businesses, who may not be able to afford such costs, to dispose of toxic chemicals by new procedures.

The following components for improvement in Manitoba's hazardous chemicals collection and transport are offered:

1. Use of specialized vehicles for collection and transport of hazardous chemical wastes from point of origin.
2. Safe, temporary storage facility close to major originator of the hazardous material.
3. If the preceding two components are carried out by the private sector, then a strict licensing requirement, similar to that for pesticide spray operators, should be introduced for employees and vehicles.
4. Control of transport by rail or truck, of chemicals for waste disposal that do not originate in Manitoba, but which pass through the province. Tank car loads of waste solvents are transported through Manitoba at present from Alberta to a waste disposal facility in Ontario.
5. Financial incentives for small businesses and organizations to make it less costly for them to take part in a hazardous chemical disposal program.
6. A public education program to make individuals aware of the hazards of excessive dumping of paints, solvents, pesticides and wood preservatives in sewers or landfill sites.

Environmental Chemicals Committee
D. Muir, Chairman

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Approved Nov. 30, 1979 meeting.

APPENDIX 1: HAZARDOUS WASTES IN MANITOBA*

CATEGORY	Quantity MIGY	Quantity MPY	Hazardous Component
Alkaline & Acid Solutions	2500		heavy metals
Contaminated soil & sand		4010.	—
Solvents	2.3		chlorinated hydrocarbons
Oils (including transformer oils)	5.		PCB's
Oil/solvent	0.1		aromatic & chlorinated hydrocarbons
Paint sludge	0.1		dyes & solvents
Pesticide - containing waste		0.001	pesticides & surfactants
Aqueous chemical wastes	90.		heavy metals; misc. org. chemicals
Tetraethyl lead wastes	0.008		tetraethyl lead
Solid chemical waste		17.	heavy metals; misc. organics
Heavy metal waste	0.013		heavy metals
Solid waste		356.	—
Pathological liquid waste	2.5		—
Pathological solid waste		4.8	—

*from W.L. Wardrop and Associates, Ltd., 1979. Inventory of hazardous waste in the northwest region. Vol. 1, Table 6-4
MIGY = million Imperial gallons per year
MPY = million pounds per year.

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BRIEF RE MANAGEMENT OF AND REGULATIONS PERTAINING TO HAZARDOUS CHEMICAL WASTES

Recommendation

The Manitoba Environmental Council reiterates its November 30, 1979 brief to the Minister that procedures be instituted to ensure the safe collection and transport of hazardous waste chemicals intended for disposal or storage within or outside of Manitoba and further recommends specific additional procedures, including a policy on management of these wastes, be developed, instituted and widely publicized.

Background

Since the Council's November 30, 1979 brief on collection and transport of hazardous chemical wastes, the present inventory and rates of production of hazardous wastes in Manitoba have become better known through an additional study (Reid, Crowthers & Partners et al. 1980, Hazardous Wastes in Northern & Western Canada: The Need For a Waste Management Strategy. Vol. I Assessment of Need., 243 p. 3 Appendices.)

In addition to the previous recommendation concerning use of specialized vehicles, local storage facilities, licensing requirements for vehicles and operators, control of intraprovincial transport, financial incentives and public education, the following five additional procedures are recommended:

a. That a government policy for government (i.e. federal, provincial and municipal) agencies, industries and other contributors on the methods of collection, transport, disposal, incineration or perpetual storage of different types of hazardous chemical wastes in Manitoba be formulated and enacted.

b. That the public be made aware of this policy by distribution of publications and publicity through the media.

c. That regulations, including requirements for public hearings be developed and enacted for siting of disposal, incineration or perpetual storage facilities and that priority be assigned to regulations for hazardous chemicals at land fill sites.

d. That regulations be developed and issued for waste management firms.

e. That incentives be offered to businesses to encourage recycling and or disposal of wastes, e.g. used engine oils. It is to be noted that the Council approved a resolution at its December 3, 1975 meeting on the disposal of waste lubricating oil (see M.E.C. Annual Report Four: 1976, p. 48) but that, except for an indication that a committee was studying this problem, no results have apparently been forthcoming.

Environmental Chemicals Committee,
D. Muir, Chairman

* * *

Approved May 2, 1980 meeting.

BRIEF RE E.M.D. RESPONSE TO HAZARDOUS CHEMICALS

Recommendation

The Manitoba Environmental Council recommends to the Minister that immediate action be taken to improve the ability of his Department's Environmental Management Division (EMD) to respond to accidents involving hazardous chemicals in Manitoba so that correct remedial procedures can be implemented and the public can be informed quickly as to the nature and significance of the hazard.

Background

The March 10, 1980 spill of 12,000 gal. of vinyl chloride (monomer) at MacGregor, Manitoba has exposed problems in EMD's ability to respond to environmental emergencies. Prompt action was taken in cordoning off the site and co-operating with other involved agencies (Canadian National Railways, Environment Canada's Environmental Protection Service, Dow Chemical of Canada Ltd.). However, there appears to have been a serious lack of preparedness to handle the inevitable enquiries about the hazards, etc. associated with the incident.

This accident took place on land under Federal jurisdiction. Similar accidents with hazardous chemicals, e.g. liquid ammonia, fuels, waste solvents and oil, pesticides, could occur on Manitoba highways or public and private property. The EMD must be able to rapidly provide public information as to the seriousness of the accident involving a specific chemical when it occurs under provincial jurisdiction. The following procedures should be taken now to improve EMD's currently inadequate communications response.

a. Compilation by the EMD of a experts list in various areas such as disposal and handling of toxic substances, worker safety, toxiciology and environmental chemistry. Much expertise is currently available on the staffs of universities, hospitals and government laboratories in Manitoba. These individuals could be consulted by EMD's technical staff and especially by information officers or government spokespersons, to provide rapid access to the facts. The Council's Environmental Chemicals Committee is willing to assist in the preparation of the recommended compilation.

b. Allow government employees, who are actually directing the response to environmental emergencies, to handle enquiries from the media.

c. The EMD should improve its communications with public interest groups and professional associations to make citizens aware of its role in the field of hazardous chemicals and in the response of environmental emergencies. This could be done with audio-visual presentations, films and distribution of publications.

d. EMD's on-site ability to measure hazardous chemicals levels should be initiated. Particular emphasis should be directed to gases, such as ammonia, chlorine, methane, and vinyl chloride. Portable equipment is required so that accurate and instant measurements can be obtained at the accident area. Instrumentation should be sophisticated enough to enable measurements at 10 to 100 fold lower than hazardous concentrations so that actual exposure risks can be assessed more reliably.

Environmental Chemicals Committee
D. Muir, Chairman.

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Adopted May 2, 1980 meeting.

Marjorie Earl

Environment council gets cold shoulder

There's a lot of talk these days about the environment and those who threaten it.

But very little is said about an organization that exists to protect it, the Manitoba Environmental Council (MEC).

And what is said is often not very complimentary.

Nevertheless MEC continues to study the impact of various assaults on the environment, to publish detailed reports about them which are available free of charge to the public and otherwise to discharge the duties for which it was formed in 1972.

It is the responsibility of the council to discover, research and provide information not only to the minister of mines, resources and environmental management but to the public as well. The west's only minister in the Trudeau cabinet, Lloyd Axworthy, was once its chairman.

Although the council is funded by the provincial government and is composed of scientists and environmentalists from all parts of the province, the government, in a fashion that has come to be typical, doesn't pay much attention to it.

For example, in November of last year MEC submitted a brief to the minister recommending that "immediate steps be taken to ensure the safe collection and transport of hazardous waste chemicals intended for disposal/storage facilities within or outside of Manitoba in order to reduce the possibility of accidents which could have serious environmental consequences."

Perhaps if the MEC report had been heeded, the spill of vinyl chloride at MacGregor might have been avoided. The report deals with a number of problems related to disposal and transport of hazardous material but it specifically urges the government to control the transport by rail or truck of chemicals originating in other parts of the country.

In a separate brief, also dated last November, MEC urges that drinking water from the Red River, by the community of Selkirk, be discontinued. Chlorine, says the report, is not always effective in water with large amounts of suspended protein and organic matter.

It quotes a Norwegian study which found that chlorine was useless in preventing waterbone poliomyelitis infection and another, presented at the 31st annual convention of Western Canada water and sewage conference, advising against bathing in the Red and drinking the water even if treated in a sewage treatment plant.

The latter paper found that "bathers using the Red River were at risk of contracting enteric infections" and that "the town of Selkirk, using moderately polluted water from an unprotected source is subjecting their water users to a considerable degree of risk in the event of a water treatment plant failure."

Another of the council's recommendations is not only being ignored but is virtually laughed at by the inhabitants of Pinawa.

The council recommends the building of a new road so that the inhabitants of Pinawa would have an escape route in the event of accidental emissions of radioactive material from the Whiteshell Nuclear Research Establishment.

Immediately after this report was issued, also on Nov. 30, the town councillors expressed "surprise" that such a proposal should be put forward at all.

"A new road would be a good thing for commercial purposes," said Mayor Howard Gilmore to Tribune Legislative reporter Robert Matas. "But no one that I know of here has ever suggested that we need a new road because of the nuclear plant."

Apparently the Three Mile Island accident had no effect on Pinawa's attitude to the Nuclear station.

Pinawa is located in a cul de sac bounded on the south and east by the Winnipeg River and on the north by marsh. The only highway exit for Pinawa residents is Highway 211 which passes within five kilometres of the Nuclear Research Establishment.

The road MEC proposes would go in the opposite direction following an old trail already in existence.

Should the Nuclear Research Station malfunction, Pinawa residents, as things are now, would have to travel towards the damage rather than away from it in order to evacuate the area.

It is pretty well standard for governments to invite and/or commission studies on this and briefs on that. It seems also to be standard practice to ignore most of the results.

I may be wrong but this seems to me to be a waste of the taxpayers' money and a dangerous practice to boot. If you re going to hire somebody to give advice it seems wise to follow that advice.

THE WINNIPEG TRIBUNE, April 29, 1980

ENVIRONMENTAL QUALITY — J.B. NICKELS

An Environmental Quality Task Force was established to respond to a request from the Honourable A. Brian Ransom for advice with regard to the establishment of Environmental Quality Standards in Manitoba. A report containing background information and initial activities of the Task Force has been published in **Annual Report Seven: 1979, p. 53-55.** With the realignment of environmental responsibilities within the Cabinet, there was some question as to whether the task should be terminated. It was decided to continue our efforts and to carry out a solicitation of views from the Council membership by means of a second and more specific questionnaire.

This questionnaire, as it was finally constructed, was sent out to the membership on January 15, 1980 — copies going to all members of Council, including honourary members and advisers. Approximately 86 were sent out. By February 1st, 40% of the Council had responded. On behalf of the Task Force, I commend those who did respond. By February 26th, we had raised this to a 48% return, and by February 28th, we had approximately a 60% return. For those of us in Social Sciences this was a high return, and we are very happy about this.

On April 10th, 1980, I received a memo from Mr. Keleher indicating that we should not wait any longer as there would probably be no further stragglers. We then took steps to analyze the information obtained. On April 23rd, 1980, the Executive approved an amount of money to allow for the data analysis. I wish I could report the results at this point; it's premature since we just began to have the data put into the computer. They will be available very shortly. When the information is available, the Task Force members will be convened and the material presented to them. Very shortly after that the results will be reported to the Council.

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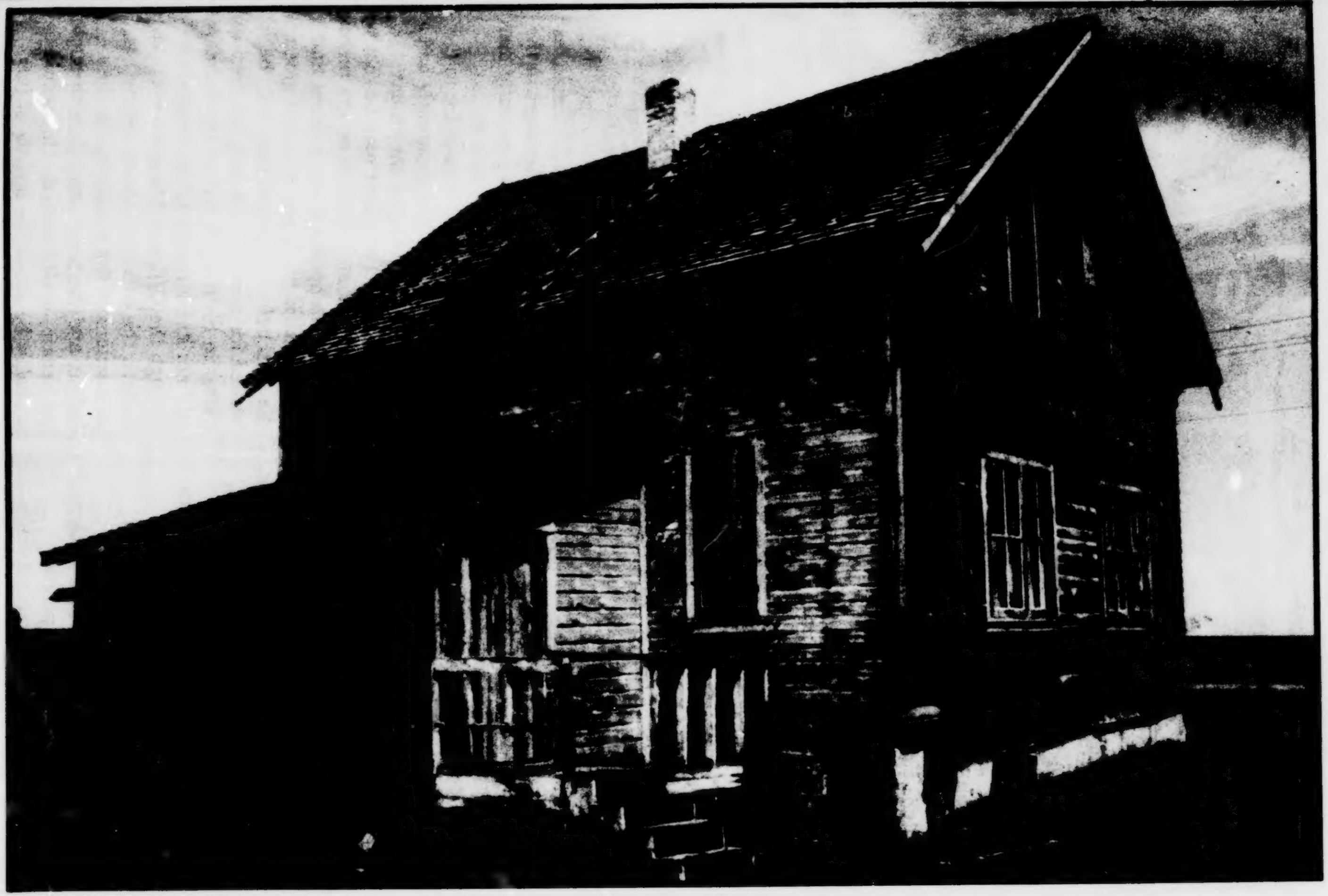
Presented at May 2, 1980 meeting.



GARRISON DIVERSION PROJECT — R.D. HOWARD

On behalf of the Action Committee re Garrison Diversion, I wish to thank the Manitoba Environmental Council for the invitation to address its Annual Meeting in order to summarize the activities of the Action Committee and to provide an update on the Garrison Diversion Project. The kinds of activities during the last 22 meetings and approximately 8 months of the Action Committee included petitions, a series of speeches made to individual groups throughout Manitoba and a membership drive which enrolled in excess of 30 municipalities, most of whom had been represented at the founding meeting on June 21, 1979 [For background, see **Annual Report Seven, 1979, p. 17-18** — **ed.**]. I will give you an indication of the organizations that are members of the Action Committee. It's groups like the *Souris River Valley Water Control Commission*, the *Lower Red River Valley Water Control Commission*, the *Lake Manitoba Commercial Fishermen's Association*, the *Manitoba Naturalist Society*, the *Manitoba Federation of Labour*, the *Canadian Water Resources Association, Manitoba Branch*, several *Chambers of Commerce*, the *Manitoba Indian Brotherhood*, *Manitoba Womens' Institute* Tourist Associations, 6 Regional Development Corporations and, as I mentioned before, rural and urban municipalities, along-with many other interested and concerned people.

During the course of our activities we found ourselves very much involved with the National Audubon Society. They had commenced an action against the capriciousness of the Secretary of the Interior who apparently used an arbitrary act which contravened legislation of the United States. In resolving it the parties agreed on many issues that we felt were vital to the protection of our environment and they were able to get them removed completely from the record.

We have spend some $12,000 on our legal campaign. We found that there is an awful lot that Canadians don't understand in American politics and law. We have lobbied all the representatives of the House and all the Senators in the United States Senate. Very recently there has been a submission made by Mr. Town, the Canadian Ambassador to the United States. This has apparently had a substantive impact upon the House subcommittee. The effect may be that we have had a small influence on the present situation. It appears at the present time that the dark green and the light green on the map before you may very well be headed for negation not only by President Carter in his budget, but on the floor. We will not know that until the procedure through the Office of Management and Budget, the subcommittee's recommendations to the committee in the House, and the same procedure through the Senate, is all finished. This would probably be about the middle of July.

POETRY READING

to protest the
GARRISON DIVERSION PROJECT

DATE: Tuesday, October 14, 1980

TIME: 10:30 am.

PLACE: United States Consulate
6 Donald Street, Winnipeg

Woodcut by A. H. Adamson

The North Dakotan Schools are teaching dry land irrigation. I suggest to you that there will be no backing away, in the next 20 years, from the group who have lived with the problem that North Dakota has, the "motherhood" issue of having given up some 550,000 acres to various water schemes which helped the Lower Missouri and Mississippi River Systems. The point we strongly hold to is that there be no transfer of water from that system into the Hudson Bay system. That system could potentially be contaminated. It would definitely destroy the quality of life in the urban municipalities that are along the Souris, Assiniboine and Red Rivers, the communities of fishermen that are located on all our lakes, and the way of life for our native population. The awareness we need now is that if things are not done before the middle of July, 1980, I think Manitoba will have no recourse. One thing that pertains to this in the United States is a survey recently done by North Dakotans and a Committee to Save North Dakota. From that survey, they have an indication that where it may have been a 40-60 split against Garrison previously, now it probably has reversed itself. Because of the drought situation that extends over most of the Central Plains in North America this year, many people who have been sitting on the fence have now switched to being very much in favor of Garrison.

Attempts to get more concerted political action by Canada and Manitoba has not been all that successful. Apparently we are going to be in receipt of some type of a booklet by the Manitoba Government that defines the action taken since the appointment of the International Joint Committee to review the situation.

We got through the United States Freedom of Information Act, a draft memorandum that supposedly did not exist. We were able to get it delivered the same morning to all the MLA's and that day to all MP's. We were also able to deliver a copy to the Consulate General, who had been informed by the Secretary of State that the document did not exist. On March 31, April 1st and 2nd, we had a representative, Jerry McKinney in Washington. He appeared before the Appropriations Sub-committee of the House and Senate and made a presentation which resulted in a major article in the **Washington Post.** This probably was the driving force that caused the Canadian Ambassador to take the stand that he has taken. We were pleased to have the participation of some staff of the administration groups in the United States, as well as Senators, and Congressional members, who welcomed the presence of the Canadians to explain what was happening.

The governments have not negotiated as recommended by the International Joint Commission and continuing pressure to commence those negotiations must be carried out.

We are concerned about the McClusky Canal, which is completed. As soon as that water goes into Lonetree Reservoir, it's into the Hudson Bay watershed. The prototype fish screen has been tested. In Denver they tested another prototype. We observed that although they claim certain results, they are not using live fish eggs or live minnows in the testing. Our response is that unless it's 100% sure, without any possibility of human failure, it isn't good enough.

Expropriations are proceeding on the new Rockford Canal. There has been work in the Warwick irrigation area. Both of those are in the Hudson Bay watershed. A sum of 12.7 million dollars, for continuation of construction, was requested by the Bureau of Reclamation and Garrison Conservancy District. The driving force behind this is a senior Senator, Milton Young, of North Dakota.

Representation in Manitoba was made by members of the Garrison Diversion Overview Committee. They met in closed session with members of the Manitoba Government on March 25. A press release was later issued. The difficulty that we find with this approach is that in a free, open society, there should be democratic input from the people. You can rest assured we will continue to strive for this [According to the Winnipeg Tribune in July, 1980, the sum of $12.7 million has been allotted for the Garrison Diversion project in 1981. It was made up of $9.7 million attached to an emergency fund for victims of the Mount St. Helen volcano disaster and a transfer of $3 million that was appropriated two years ago. Senator Milton Young said, "We have already sunk $146 million into it so we cannot stop now." The latest funds would be used for the Lonetree Reservoir and some other diversion features — ed.]

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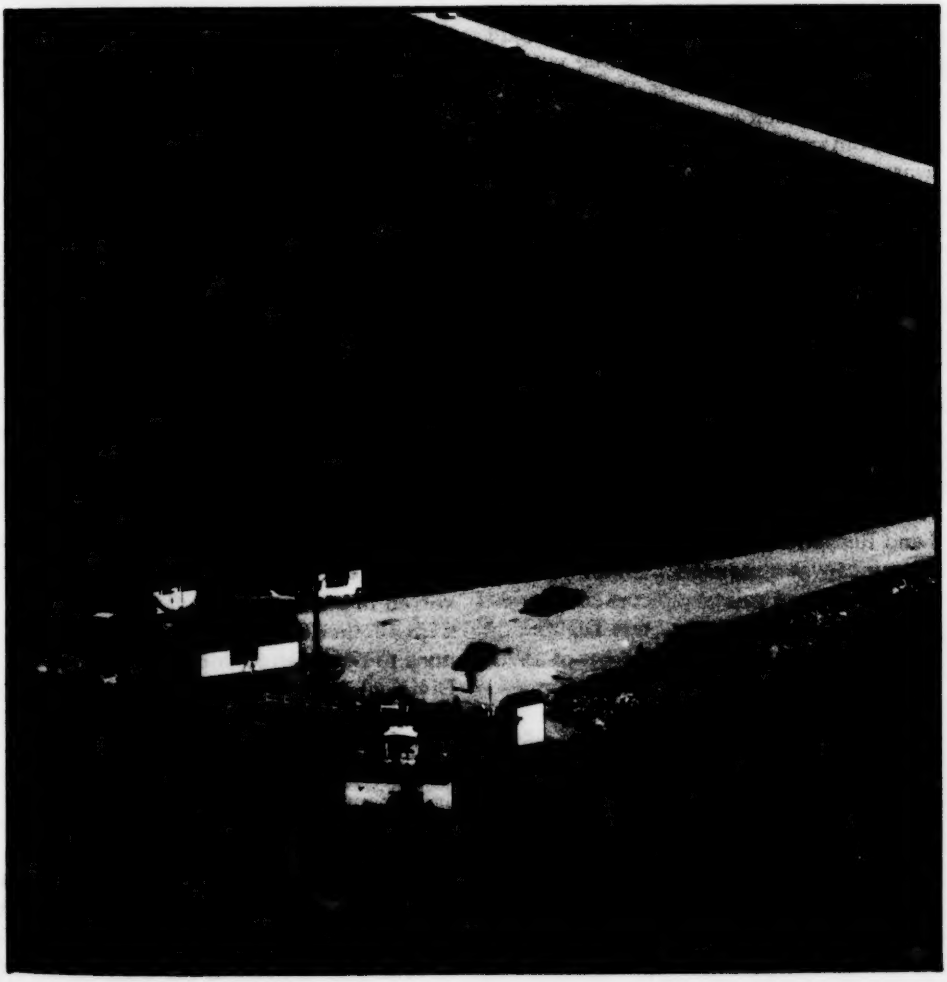
Presented at May 2, 1980 meeting.



LAND USE — COLIN HOLBROW

In what seems to be a tradition, the Land Use Committee has had an active, interesting and productive year. Attendance was, on the whole, excellent for the eight meetings held during the fall and winter terms. There were at least 4 or 5 members to each meeting, except one. Thus, out of the eight meetings, there was participation at 7 of them. The Committee's work was focussed on a variety of items.

The fall segment of the term involved the preparation of a brief for the Council's forum on Red River Flooding. Time constraints did not allow the brief to be presented so the Committee decided to prepare an expanded and more comprehensive type of brief. This report is entitled "Recommendations Pertaining to the Administration, Allocation and Control of Water and Land Resources in Manitoba". It examines water management and land uses under two primary pieces of legislation — the Conservation Districts Act of 1976 and the Planning Act of 1975. The recommendations mirror the underlying premise that the wise stewardship of our resources dictates that water and land be jointly managed. The Committee formulated 4 recommendations which are included in the attached brief.

The second brief, prepared by the Committee, was a review of the final recommendations of the Clean Environment Commission with regard to its investigation of intensive livestock operations in Manitoba. The brief was not concerned with the entire recommendations but only in so far as they dealt with the recommendations offered by the Land Use Committee brief to the Commission on this subject. The purpose of the review was to ascertain the extent to which the Committee's brief was accepted by the Clean Environment Commission, In most instances, no assessment is made as to the outcome of briefs to various organizations. Much effort is expended on the formulation and submission of briefs but analysis is seldom made as to their results. It is consequently worthwhile to occasionally ascertain the effectiveness of briefs prepared by Council committees. In the present instance, as indicated in our review, some of our recommendations were accepted, while others were not.

The Committee has also been involved in other subjects. One was liaison with another Committee regarding questions to the Environmental Management Division. Another was a resolution re. Crown Lands by the Women's Institute. We solicited comments on it from two government departments. A third involvement has been with regard to the Tourism Development Plan. An input was solicited from the Council. I am planning to meet with the Wildlife Chairman to explore how a response can be made to this request.

The final activity of the Committee,

which consumed a major portion of its time, was supervision of the research work being undertaken for the Committee.

It actually had its impetus from a previous study done for the Land Use Committee under the chairmanship of Basil Rotoff. That study involved a comparison of a multitude of Federal and Provincial Acts. Our study was involved with only six — The Clean Environment Act, The Forestry Act, The Mines Act, The Industrial Minerals Drilling Act, The Planning Act and the Conservation Districts Act. As a result of this review, a series of 17 recommendations were formulated. They have been issued as a handout to this meeting. Unfortuantely, time and other problems prevented the issuance of the explanatory material. It is also desirable that the brief be reviewed by two of the organizations represented on the Council, namely the Canadian Institute of Forestry (Man. Division) and the Mining Association of Manitoba. After this has been accomplished, it is proposed to submit it to the Council's Board of Directors for approval.

This concludes my report. I would again however like to express my appreciation for the assistance received from the other members of the Committee.

Presentation at May 2, 1980 meeting.

REVIEW OF C.E.C. REPORT ON INTENSIVE LIVESTOCK INVESTIGATIONS

Background

On June 1, 1978, the Honourable Brian Ransom then Minister of Mines, Natural Resources and Environment requested the Clean Environment Commission to conduct an investigation on the existing and potential water, soil and air pollution problems associated with the operation of intensive livestock operations in Manitoba. The Commission's mandate was to develop, "guidelines or regulations to provide a workable solution to such problems".

Seven public hearings were held throughout agro-Manitoba and were designed to allow accessibility to all interested parties. Prior to the hearings, a paper entitled **Environmental Problems Associated with the Livestock Industry in Manitoba** was prepared by the Environmental Mangement Division and was distributed to raise the issues and stimulate public debate.

Council Input

In response to the Commission's letter of September 20, 1978 the Land Use Committee undertook a brief on the subject. The brief, presented on behalf of the Council being approved in principle on December 1, 1978, was made by the Land Use Committee Chairman, Professor Basil Ratoff at the Commission's Hearing in Winnipeg on December 13, 1978. It was based on the input of the regional committees and the deliberations of the Committee at four consecutive meetings. Ten recommendations were made to the Commission.

Review of Committee Recommendations

The final recommendations of the Commission were presented to the Minister on February 26, 1979. The guidelines were a culmination of 78 briefs.

The mandate of the Council is to advise the Minister on matters of environmental concern. Our organization is, unfortunately, guilty of not "following through" with its particular concerns. The technical committees diligently prepare briefs and solicit responses but our input and effectiveness on a particular topic is rarely assessed. It is incumbent upon any "watch dog" organization, that the issues continue to be carefully monitored.

An examination of the Commission's recommendations indicates that the following four Council suggestions were adopted.

The Commission has advised that the recommendations issued under The Public Health Act regarding feedlot operations be rescinded, and that new regulations be issued under The Clean Environment Act. As well, there is an indication that a multi-departmental body will be established by the agency, to develop a sound, inter-disciplinary approach.

Areas sensitive to groundwater contamination are to be mapped based on present detailed data and information is to be prepared on the precautions necessary to ensure the protection of the underground water supply.

The suggestion is made that the existing livestock operations will be expected to upgrade their facilities in five (5) years and the operators will have to submit a plan to the Department of Consumer, Corporate Affairs and the Environment within two (2) years for compliance to any new regulations.

The appropriate departments of government will co-operate to produce guidelines to enable municipalities and livestock operators to locate, plan, construct and operate feedlots in a manner compatible with the environment.

However, several of the recommendations were not adopted by the Commission. These are noted as follows.

The proposed regulations should reflect the site and the magnitude of the operations. To institute board guidelines is economically and environmentally ineffective. Site specific guidelines would eliminate many of the feedlot pollution hazards. There is no specific indication that the new or expanding operations will require an environmental impact statement. There is no hint that the legislation should be drafted with enforcement in mind. The Manitoba Environmental Council appreciates the encouragement of sound environmental management by "enabling legislation". In the area of intensive feedlot operations, however, enforcement may very well be the "carrot" incentive. While the Commission has noted the protection of groundwater sources, it has failed to recognize the importance of environmentally sensitive areas as a whole. Particular areas of the Province in Agro-Manitoba are not suited to livestock operations and should be protected from this activity.

Land Use Committee,
Colin Holbrow, Chairman

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Adopted at May 2, 1980 Council meeting.

THE ADMINISTRATION, ALLOCATION, AND CONTROL OF WATER AND LAND RESOURCES IN MANITOBA.

Summary of Recommendations

To capsulize, the Land Use Committee recommends:

1. That the Conservation Districts Act not be broadened or strengthened since this may encourage the division of land use and water management in the Province.
2. That the Minister initiate a review of The Conservation Districts Act and the Planning Act to examine whether they should be combined to allow for the prudent use and coordination of water and land resources. Although the latter Act contains broad provisions for planning districts, lack of funds or other problems appear to have frustrated the implementation of these provinces.
3. That the Minister institute a priorization of water needs on a provincial, regional and local level.
4. That the minister institute a minimum water quality standards on a provincial, regional and local level.

Introduction

Water courses, specifically rivers, have given to and taken from the plant earth and its "inhabitants" over millions of years. Most recently (geologically speaking), water has transported glacial sediments and gauged river valleys; it has provided sustenance to the flora and fauna that our food chains depend on; and it was the highway that aboriginal, and much later, European peoples used to penetrate further and further into the continental land masses. At the same time, flooding then, as now, remains a much feared problem.

The development of our rivers has become a matter of public policy. Rivers have been utilized to aid navigation, generate power, control floods, provide fishing and recreation, irrigate fields, and provide water for growing cities and industries.

Like so many of our other natural resources, water has been taken for granted. It seems only yesterday that we were feeding our gas-guzzling automobiles and building inefficiently designed homes and office buildings and yet were completely oblivious to escalating costs of energy and our wasteful living patterns.

Today, we are just beginning to appreciate the importance of water. We cannot to deplete this vital element in quantity, to alter its flow, and to diminish its quality, without realizing the implications and carefully planning and priorizing our wants and needs, so as to maximize the benefits.

Legislation

In the last two decades, Manitoba has administered the management of water through the concept of the watershed districts. In 1959, an Act to Provide for the Establishment of Watershed Conservation Districts to Conserve the Water Resources of the Province or the "Watershed Conservation Districts Act," S.M. 1959, c. 70 was established. A watershed district was defined as, "The area included in a district or sub-district shall be described in the Order of Council (to) comprise all the lands drained by the river, stream or surface watercourse ... (S. 3(2))" While the concept of districts had merit, the administration and control of the rivers fell into portions of municipalities and hence, there was no clear division of responsibility, authority and jurisdiction.

In 1970 new legislation was passed under the Resource Conservation Districts Act S.M. 1970, c. 54. Section 2 (2) states that each district "... shall consist of the entire area of municipality." A "municipality" is defined so as to include a local government district. While the problem of jurisdiction may appear to be solved, each municipality can use, abuse or misuse a river system without due consideration of the consequences of the practices it condones. As well, a municipality may be unaware of the implications of its activities downstream. It is most likely then, that a co-operative approach to the management of waterway systems will be neglected since the municipalities are not able to agree on a common goal of tackling and correcting problems of mutual concern. The parochialism is further compounded by the subdivision of municipalities into wards. Too often councils seldom institute programs aimed at the comprehensive resource management and will attempt to find piecemeal solutions from their struggling annual budgets.

Finally, in 1976 the Conservation District Acts S.M. 1976, c. 38 superceded the previous legislation. Its purposes are: "to provide for the conservation, control and prudent use of resources through the establishment of conservation districts, and to protect the correlative rights of owners."

This Act also provides for a single authority with the specific goal of managing the watershed and the responsibility of preserving the resources of the watershed district.

Under the Conservation Districts Act, a municipality or group of municipalities requests the Minister of Natural Resources to consider the formation of a district. A proposal is then submitted to the municipalities having lands within a suggested district outlining the boundaries of the district. The district is premised on the geographic contours of the watershed area.

To date several watershed districts have been established or are being considered under this legislation — Whitemud River, Turtle River, Alonsa, Turtle Mountain, Cook's Creek.

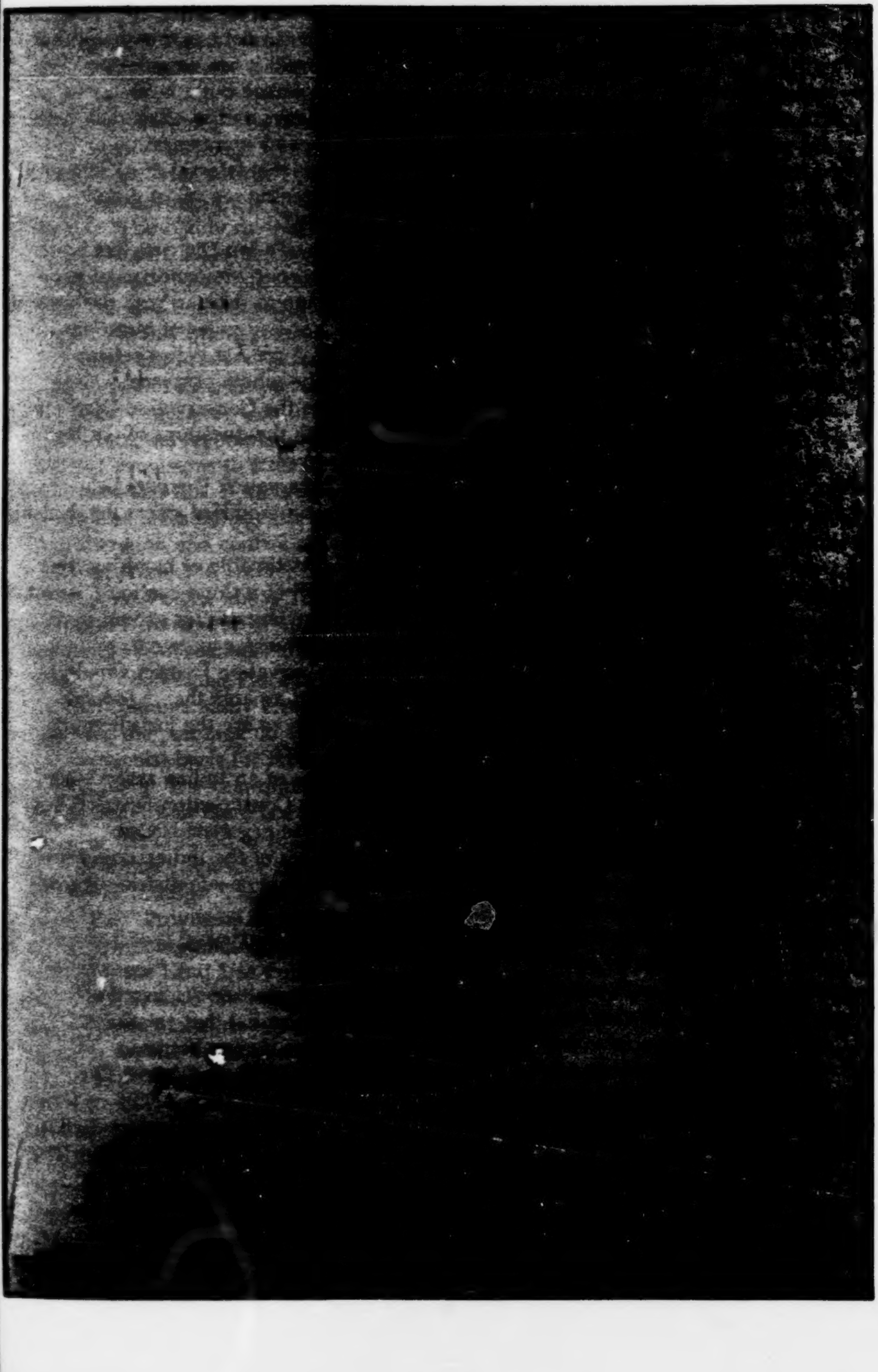
The board of a district is required to submit a comprehensive, long-range watershed management plan within two years of requesting the creation of a district. This plan must include consideration of the water resources and the other resources (land, forest, wildlife, etc.) within the district. The boards are assisted by a multi-disciplinary team of staff from appropriate government departments.

The Issues

The Conservation Districts Act is purported to be "progressive" legislation. This does not mean that it escapes some basic problems.

1. The watershed management concept still rests heavily on the agricultural base of the Province. The temptation is still evident for a farmer to drain a wetland area more suited to providing waterfowl habitat than to current farming techniques. An important economic factor is to consider how to control the water level rather than just draining marshes only to find marginally productive cropland. How has the use of watershed districts helped to alleviate indiscriminate drainage of wetlands in Manitoba? How much of the district boards power has been utilized in planning and controlling water drainage systems?

2. For a resource management scheme to be effective, it must allow for consultation and input from all disciplines (eg. engineers, biologists, etc.) at each stage of implementation. It is often difficult for the wildlife manager, for



example, to estimate the value of a wetland area as opposed to a known value for cropland, if the marsh is drained. How much input have the resource managers had into the conservative districts? Is the watershed conservation district approach actually allowing for a multi-disciplinary approach?

3. The Land Use Committee is most disturbed over the continued invasion through the breaking, clearing and draining of grasslands, woodlands and wetlands, and the burning of crop residues, clear tillage and summer fallowing. In our estimation these practices are destroying upland and aquatic wildlife habitat and causing soil deterioration, and excessive and destructive erosion and flooding. Under the current watershed management legislation, have the resource managers been able to encourage better landuse practices?

4. Monies for districts and sub-districts are calculated on the formula — A ÷ B × C

A = total of equalized assessed value of rateable lands of the municipality included in the district or sub-district.

B = total equalized assessed value of all rateable lands in the district or sub-district.

C = total cost of the district or sub-district program.

A system of land assessment which subjects all land to taxation, is in our estimation, not the most equitable and efficient method of allowing for maximum productivity. Although, uncultivated land is assessed at a lower rate than cultivated land, the farmer does not perceive the distinction between the two and therefore expects to average his tax bill over the entire acreage. The land must produce some economic return.

The Committee is fully aware of the problem encountered in the use of large, modern tillage equipment which makes uncultivated land a "nuisance." Since the above factors do not encourage optimal land-use, would it not be more appropriate to utilize other methods to calculate monies and to encourage better land practices by compensation or incentive (even the deferral of haying until after the breeding season of ground-nesting birds)?

5. The Conservation Districts Act is geared to more to the concerns of agro-Manitoba than to the northern portions of the province. A number of questions and issues arise if the Act is theoretically applied to the whole province:

(i) How does the Conservation Districts Act deal with the questions of the hydro power reserve?

(ii) Can Conservation Districts be established on modified rivers (eg. Nelson River)?

(iii) Is the Act capable of handling the establishment of a Conservation District by northern communities should they request the Minister to do so?

(iv) If a Conservation District should be established in an area that is federal crown land, how are the jurisdictional issues handled?

(v) If portions of an Indian reserve are included in a Conservation District, how are these areas negotiated? Can representatives of the Indian community sit on the district or sub-district boards?

Recommendations:

1. The Committee discussed at length, the potential that exists for conflict and confusion between The Conservation Districts Act and The Planning Act (S.M. 1975, c. 29), in terms of over-lapping and varying jurisdictions and legislative provisions. Although The Planning Act does have the power to over-ride The Conservation Districts Act should a conflict arise, this does not prevent confusion and mismanagement.

Three scenarios were created to

attempt to propose the best technique of providing for the coordinated management of water and land resources in Manitoba.

a. Strengthening The Conservation Districts Act - although this Act is intended to provide for the conservation, control and prudent use of resources, it appears to be highly drainage-oriented, and as a result, loses much of its impetus towards resource management per se. While the government should be commended for instituting progressive legislation, the inherent potential that exists between the two pieces of legislation causes the Committee grave reservations on recommending to the Minister provisions to strengthen the powers of this Act. Furthermore, the Committee fears the separation of the administration and control of water and land resources, and feels that by increasing provisions under The Conservation Districts Act would further detach the joint management of the two.

b. Strengthening The Planning Act - this Act contains many broad power to allow for the planning on a local, regional and provincial basis for resource management. The Committee is of the strong belief that there is a demonstrated need for the creation of regional planning to ensure that resources are managed in the public interest. The acceptance and use of the "Provincial Land Use Policies" is the first component to be implemented. Although the Land Use Policies (Policy No. 7 and 8) note that waterbodies having recreational or environmental significance should be protected, the main focus is still towards "... providing direction in the management our province's **land resources**" (p.3) [emphasis added]. There appears to be a limited appreciation that there is a need to actively encourage the joint coordination of water management and land use and not to separate them in policy or practice. Perhaps the enlargement of the policy guidelines to reflect this joint management would be a necessary step.

Certainly if the province could provide more funds to the Planning Districts to allow for the establishment and implementation of planning goals, much more could certainly be accomplished.

c. Combining the two Acts — the Committee strongly advises the Minister to initiate a review of The Conservation Districts Act and The Planning Act to examine whether they should be combined to allow for the planning, development and operation on a basin-wide (where feasible) or region-wide basis. We submit that one of the components to be assessed would be the provision for a single agency that draws upon the applicable and required expertise of the civil service, universities, and private consulting firms, along with elected local representatives including Indian people to allow for grass-root involvement. This Board or Commission should have the ultimate authority on resource planning, development and operation and incorporate components such environmental impact statements, priorization of water needs and water quality standards. Without elaboration it is safe to say that unless the operation, monitoring and planning are performed by the same agency, the feedback channel will be inefficient, if not absent.

2. The Committee suggests the need for instituting a priorization of water needs. We are aware of the Clean Environment Commission's hearings into water quality objectives and stream classification and feel that the priorization could be applied on the basis of Conservation Districts. (until such time as the proposed review take place or even on the basis should the current legislation not be changed). In the south the classifications of:

i - Domestic Consumption
ii - Fisheries and Recreation

iii - Industrial Consumption
iv - Agricultural and Wildlife
would be most useful. In the north we propose an expansion of the above to incorporate a system likened to the American Wild and Scenic Rivers Act:

v - Wild River — unpolluted, undamed with primitive surroundings, accessible only by trails.

vi - Scenic River — undamed, with shoreline largely undeveloped, accessible by road.

vii - Recreation River — readily accessible, with some development and pre-existing dams allowed.

viii - Future hydro-electric generation sites.

Hopefully this would necessitate the delineation and quantification of the designs of the province on a macro and micro planning scale, and the objectives of the local inhabitants on the micro scale. By so doing, each interested party would then have the opportunity to specify their demands and would allow for a clear definition of structures and jurisdictional responsibility to deal with management problems. The systemized use of such a priorization system would force such agencies as Manitoba Hydro to specify which site locations and on what basis the development of a hydro-electric damn is being planned. Perhaps then, Manitoba Hyrdo would be encouraged to move beyond the static one-component system for hydro sites into a dynamic, multi-facet system of examining other resource activities in conjunction with the generation of hydro-electricity.

3. The Land Use Committee recommends the need for instituting minimum water quality standards. The local district would then have the flexibility to institute its particular water quality standards but with a minimum standard in place. No one area would be allowed to deviate from the base line criterion. By establishing these standards, the prospective waste discharger would be informed of the conditions that must be maintained. As well, in regional planning, standards would require management officials to arrive at water quality standards when not under the pressure of a specific decision. By implementing such criteria, there is now a provision for public involvement through public notice and hearings rather than on each particular issue that arises (although in the event of this, consultation should be provided for).

Land Use Committee
Colin Holbrow, Chairman

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Approved, May 2, 1980 Council meeting.

WATER AND WASTE — A.C. MANIAR

The Committee met eight times during the year under the co-chairmanship of Mr. Alex. Penman and myself. No briefs have been prepared for this spring meeting of the Council, the reasons being provided later.

Four briefs were presented at the November 30, 1979 meeting of the Council. The first brief concerned Selkirk's water supply. After considerable discussion, including representation by the Town of Selkirk, it was decided to postpone consideration of this brief until the spring meeting. The second brief concerned the Garrison Diversion Unit. Because of a lack of current information on this project, it was recommended to the Minister that the Environmental Management Division publish and distribute a up-to-date review of the Diversion. This brief was passed by the Council. The third brief concerned the Whiteshell Nuclear Research Establishment, at Pinawa. It was recommended that a road be constructed connecting the Pinawa Town to the "Old Pinawa" townsite. It would provide an alternative evacuation exit for the Pinawa residents in the event of a malfunction at the Whiteshell nuclear plant and more direct access to the Pinawa Hospital for the area residents. This brief was not approved by the Council. The fourth brief was concerned with the background material to the Water Quality Hearings that are being conducted by the Clean Environment Commission. The material for the Souris River hearings was only distributed about 5 days in advance of the Hearings. The Committee felt that this did not provide sufficient time to review the findings and recommend that any Commission hearing be not held until two months after the publication distribution of the pertinent background information. This recommendation was accepted by the Council.

At a Committee meeting on March 6, it was agreed that no further action be taken with regard to the Selkirk water supply brief. The Council had achieved its objective of directing attention to the problem particularly since it had received extensive media including T.V. coverage at the fall meeting. The Town of Selkirk was also aware of our position. A second consideration was that the Town was now back on well water.

It was also decided that no brief on the Red River would be presented at this Council meeting so as not to interfere with the anticipated brief by the Committee to the Clean Environment Commission's forthcoming hearings on the Red River.

As you will recall, the solicitor for the Town of Selkirk read a letter from the Minister of Health dated November 14, 1979 during his discussion of our fall brief. A copy of this letter has been obtained and is reproduced below.

I have reviewed your letter of October 26, 1979, respecting the above named matter, and have referred your queries to appropriate staff of the Department of Mines, Natural Resources and Environment, *and the Department of Health and Community Services.*

Environmental Management Division staff have advised me that the Town of Selkirk has been provided with copies of all chemical results from sampling surveys performed under their jurisdiction. This includes the results of a special survey done on asbestos in drinking waters, a special survey done on trihalomethanes in drinking waters and regular chemical and heavy metal surveys carried out on the water supply system. I am also advised that a program has been underway for some time involving the analysis of drinking water samples submitted by the Town on a monthly basis to the Environmental Management Division Laboratory. Staff are not aware of the presence of "an unusual high trace of Industrial Chemical wastes", and are prepared to conduct testing of additional parameters requested by the Town or their consultants within, of course, the capabilities of the laboratory.

Staff of my Department have reported that on five occasions a total of fifteen enteroviruses were isolated from the finished water supply in the Town of Selkirk. In all cases, the viruses isolated were identified as polioviruses of vaccine strains. There were reportedly no gross water treatment plant malfunctions at the times of virus isolations. Although my medical advisors have some concern respecting the virus isolations, they do not consider that the isolations signify that the finished water is unsafe. They base this opinion on several factors including the relative newness of the virus sampling and isolation techniques utilized, the relatively small number of isolations compared with the number of sample runs made, and the lack of a correlation between the presence of viruses in the finished water and the level of infectious diseases in the Town of Selkirk. It is the intention of this Department to continue to work in this area to both refine virus concentration and isolation techniques, and to further evaluate the treatment efficiency and the public health safety of the Selkirk water supply system. We are hopeful that the Town will continue to cooperate with us in this endeavour.

As the above discussion is very brief in nature, I have requested that appropriate staff of the two Departments involved make themselves available to discuss the matter with you and your advisors. Please contact Mr. K.J. Kjartanson of the Environmental Management Division at 895-5238 should you wish to make arrangements for such a meeting.

The last remaining subject for discussion is the Garrison Diversion Unit. Our main concern remains with the potential impacts of the transfer of Missouri Basin Water into the Hudson Bay Basin. Although now only indirectly involved in this subject, our support is extended to the Manitoba Action Committee. I understand a report is being presented later on the current status of this project.

Finally, I would like to acknowledge the assistance received from all Committee members. They have made our task much easier.

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Presentation at May 2, 1980 Council Meeting.

BRIEF RE: SELKIRK WATER SUPPLY

Recommendation

The Manitoba Environmental Council recommends to its Minister that the supply of drinking water from the Red River for use by the community of Selkirk, Manitoba be discontinued and an alternative arrangement made for the community's water supply.

Background

Action of chlorine to kill microbial flora (viruses, bacteria, fungi, etc.) in water decreases with increasing concentrations of dissolved and suspended protein and organic matter (1, 2). [For References, see Appendix 1] The value of pH and water temperature also affects the activity of chlorine. The higher the pH value of water, the less is the effect of chlorine. The higher the temperature of water, the greater the killing power of chlorine on microbial flora. Heinertz and Vahlne (3) in Norway found that chlorine was useless in preventing waterborne poliomyelitis infection. McCulloch (4) found similar evidences elsewhere. Moreover, Bell et al. (5) reiterated similar concerns in their paper (see Appendix 2 for Abstract) presented at Winnipeg to the 31st Annual Convention of the Western Canada Water and Sewage Conference, Sept. 19-21, 1979. They stated, "... that bathers using the [Red] river were at risk of contracting enteric infections ..." and that "... the town of Selkirk, using moderately polluted water from an unprotected source is subjecting their water users to a considerable degree of risk in the event of a water treatment plant failure."

It is an accepted fact that the Red River is polluted, although the published literature documenting this fact is scanty. Waste and sewerage is dumped into the river by industries and residents. Organic matter in Red River water is bound to interfere with chlorine activity in the Selkirk water treatment plant.

The stated recommendation is submitted to improve water quality and safeguard the health of the people of Selkirk, Manitoba.

Appendix 1: References

1. Sykes, G. 1958. Disinfection and Sterilization, E. & F.N. Span Ltd., London, 236-237 and 312-322.
2. Maniar, A.C. 1976. Disinfectants. Arogyz — J. Health Sci. 2, 81-89. M.E.M.D. Library Reprint No. 5123
3. Heinertz, N.O. and G. Vahlne. Nord. hyd. Tids. 1952, **33**(3), 65 (Via Biol. Abs., 1953, **27**, 676).
4. McCulloch, E.C. 1945. Disinfection and Sterilization, Kimpton, London. (Via Sykes, G. 1958).
5. Bell, J.B. et al. 1979. A review of current concerns in water microbiology and their applicability to the Red River, Manitoba, Canada. Paper presented at the 31st Annual Convention of the Western Canada Water and Sewage Conference, Winnipeg, Sept. 19 - 21, i + [33 p.] M.E.M.D. Library Reprint No. 5136.

Appendix 2: Abstract, Bell et al., 1979

The literature concerning waterborne infections, water quality and recreation, salmonella in the environment, resistance transfer factors and the sources and control of microbial contamination are reviewed. Typhoid, *Salmonella,* enteropathogenic *E. coli, Shigella, Giardia lambia* and viral infections are discussed.

Epidemiological evidence for recreational waters is presented and other waterborne bacterial infections including *Pseudomonas aeruginosa* and *Aeromonas* are shown to be associated with swimming.

A case study of the Red river demonstrates that the major sources of microbial contamination to the Red River are the City of Winnipeg wastewater pollution control centres. Salmonella and fecal coliforms were found to contain transferable drug resistance and it was felt that bathers using the river were at risk of contracting enteric infections and other infections involving *Pseudomonas aeruginosa*. Similarly the town of Selkirk, using moderately polluted water from an unprotected source is subjecting their water users to a considerable degree of risk in the event of a water treatment plant failure. It was advocated that a fecal coliform objective of 200 fecal coliforms per 100 ml be adopted for the Red River and that a lowering off of the levels of *Pseudomonas aeruginosa* be sought. Furthermore, it was felt desirable to eliminate the discharge of bacteria containing R factors to the Red River.

Water and Waste Committee
A.C. Maniar — Co-chairman

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Presented at Nov. 30, 1979 Meeting.

BRIEF RE GARRISON DIVERSION PUBLICATION

Recommendation

The Manitoba Environmental Council again recommends to its Minister that he direct his Environmental Management Division to publish and distribute widely an up-to-date review of the Garrison Diversion Unit, including the various diversion proposals and the positions of various agencies (including but not necessarily restricted to the International Joint Commission, its Study Board, the Government of Manitoba and the Government of Canada) so that Manitobans may better understand its changing potential effects on Manitoba.

Background

The Garrison Diversion Unit has the potentiality for an adverse impact on Manitoba. It has been of public concern here since 1974 when the Council sponsored its first forum on this topic. The Diversion is of interest to Manitobans as evidenced by numerous informational requests to the Council. Other agencies such as the Minister's Department and Environment Canada must have a similar experience. Initially these requests could be handled by available publications (e.g. Council Study 2 — proceedings of the above mentioned forum) but our material became outdated particularly after reports by the International Joint Commission's Study Board. Hearings on the Study Board's Report by the I.J.C. and I.J.C.'s own report made further revisions to the "current opinion" about the Unit. Other agencies, e.g. Environmental Management Division, did not prepare information for public distribution but tended to rely on media releases. This practice does not adequately discharge the Department's implied, if not explicit, responsibility to Manitobans. When an organization, group or individual now becomes interested in the Garrison Diversion Unit, one can only obtain such information by a potpourri of assorted materials, most of which are obsolete.

Yet the problems associated with the Garrison Diversion Unit have not yet even been negotiated let alone resolved, so that it must surely rank as an environmental issue of high priority. The preparation of a Garrison Diversion review publication is therefore not requested for historical purposes but as a necessity to allow Manitobans to assess the present "potential" impacts. A review of the Garrison Diversion literature, currently in progress, may reveal that the Environmental Management Division has never solely prepared any publications on the Garrison Diversion Unit.

The Water and Waste Committee has reviewed the Minister's reply to the Council's first recommendation regarding the desirability for a current Divisional publication on the Garrison and judged it "inadequate". It is presumptious to expect that the public is informed because agencies have prepared multi-volume reports. What is required for public information is a concise, technically competent but understandable, pictorially adequate treatment.

The Garrison Diversion Unit also exemplifies biological principles in zoogeography, introduction of exotic species, and plant physiology. The preparation of an adequate review would provide local source material for biology classes in Manitoba schools.

The Committee hopes that the need for a current report on the Garrison Diversion Unit, with particular emphasis on Manitoban concerns has been demonstrated.

Water and Waste Committee
A.C. Maniar, Co-Chairman

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Approved Nov. 30, 1979 meeting.

BRIEF RE WHITESHELL NUCLEAR RESEARCH ESTABLISHMENT

Recommendation

The Manitoba Environmental Council recommends to its Minister that he request the Minister of Highways and Transportation to have a road constructed from Pinawa to the "Old Pinawa" townsite so that there will be an alternative evacuation exit for Pinawa residents in case of a malfunction at the Whiteshell Nuclear Research Establishment. This road also will allow for easier and more direct access to the Pinawa Hospital for the residents of "Old Pinawa" and Pointe Du Bois.

Background

There are two "Pinawa" townsites in Manitoba (Figure 1.) "Old Pinawa" is situated near the dam where an hydro-electric plant existed before the Seven Sisters hydro-electric plant was built. It is connected to Highway 313 by a gravel road. There are several farms at present near "Old Pinawa" even though all of the houses near the abandoned dam have been destroyed. The permanent population is estimated to consist now of about 50 persons.

A new Pinawa townsite (hereafter referred to as Pinawa) is located at the terminus of Highway 211, approximately 9 miles from Highway 11. It came into existence because of the Whiteshell Nuclear Research Establishment. It's location is a cul de sac bounded on the South and East by the Winnipeg River and on the North generally by marshy terrain, except for an ill defined trail leading towards Old Pinawa.

The Whiteshell Nuclear Research Establishment is located East of the Winnipeg River (Figure 1.) and its only highway connection is with Highway 211, this distance being 3 miles or less.

Because of the geographic situation, the only existing highway exit for Pinawa residents is on Highway 211, which passes within 3 miles of the Nuclear Research Establishment. It is considered desirable that another evacuation route be established as an additional safeguard in case of a malfunction at the Nuclear Research Establishment. This additional route also would have direct benefits for the residents of Old Pinawa and Pointe Du Bois by providing them with better access to hospital and other facilities at Pinawa.

Water and Waste Committee
A.C. Maniar, Co-Chairman

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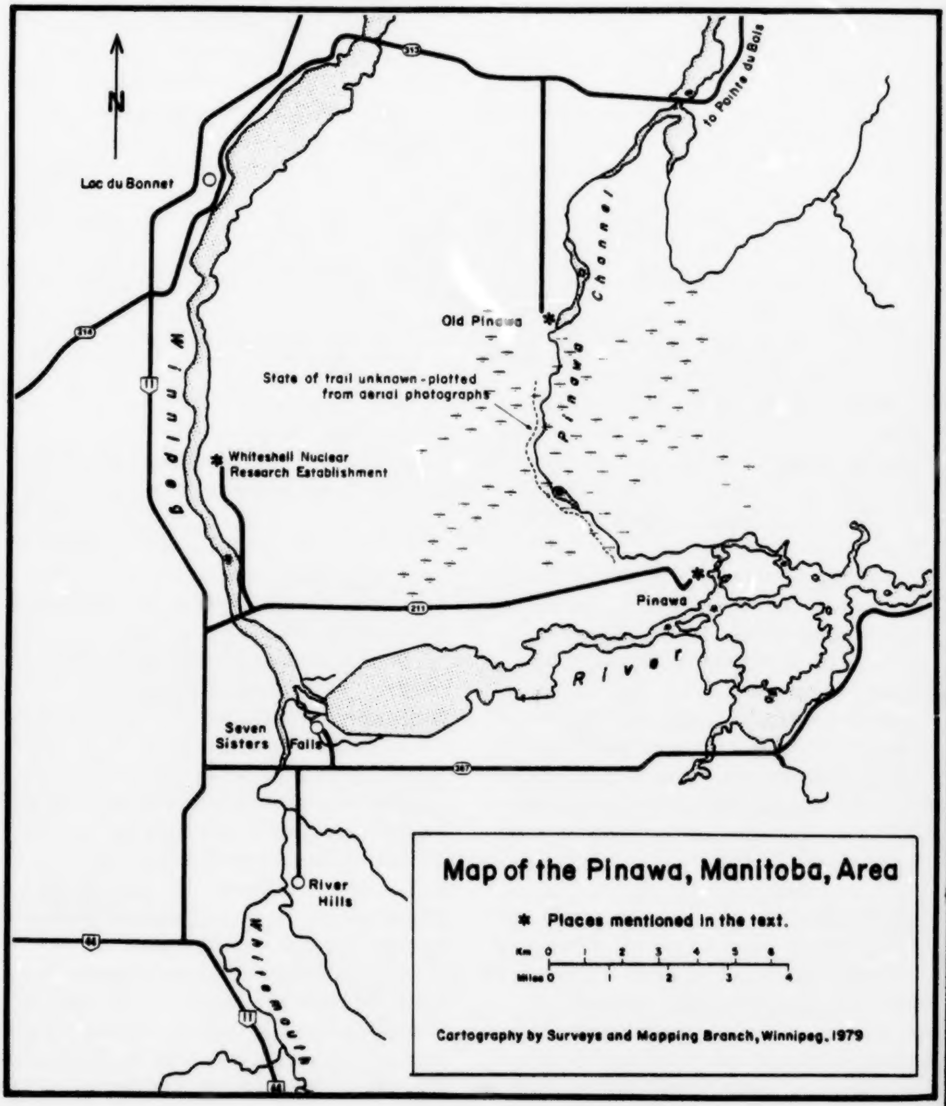
Defeated at Nov. 30, 1979 meeting.


N
313
Lac du Bonnet
214
11
Winnipeg
Whiteshell Nuclear Research Establishment
Old Pinawa
State of trail unknown - plotted from aerial photographs
Pinawa Channel
to Pointe du Bois
Pinawa
211
River
Seven Sisters Falls
307
River Hills
44
11
Whitemouth
Map of the Pinawa, Manitoba, Area
* Places mentioned in the text.
Km 0 1 2 3 4 5 6
Miles 0 1 2 3 4
Cartography by Surveys and Mapping Branch, Winnipeg, 1979

BRIEF RE TIMING OF WATER QUALITY HEARINGS

Recommendation

The Manitoba Environmental Council recommends to its Minister that he direct the Clean Environment Commission to defer holding any public hearing regarding the application of surface water quality objectives and stream classification for a particular drainage basin until two months after the proposed classification for that drainage basin by the Environmental Management Division, singly or in collaboration with others, has been published and distributed.

Background

This recommendation results from the Committee's first and only experience with Clean Environment Commission public hearings. In September, 1979, the Council and others were invited to participate in the Commission's first hearings on water quality objectives and stream classification for a specific drainage basin, the Souris. Notice of intention to hold these hearings was, in our opinion, based only on the promise of a forthcoming proposal, an adequate 36 working days. However the Environmental Management Division's "proposal" regarding this drainage basin was not received at the Council office until 5 working days before the 1st hearing (Melita, Nov. 5) The Committee felt that a worthwhile presentation could not be made without serious study of the Divisional 49 page proposal. It reluctantly decided not to make a submission to the Souris River basin hearings.

The Committee also felt that the Hon. A. Brian Ransom should be lauded for his efforts to solicit public expression as to the water quality desired in each of Manitoba's drainage basins. However, unless more time is allowed between receipt of the Divisional proposal by an intended participant at a Commission hearing and the hearing itself, public participation, except in rare instances, will not be very informed. Because the quality of life in Manitoba is enhanced by its water resources, it is essential that the Commission receive informed opinions on each water basin.

The Council has, practically since its inception, been supportive of the Clean Environment Commission during its hearings pertaining to pesticide applications. Our Annual Reports record this involvement so that documentation is unnecessary. More recently the Council has made a submission to the Commission's "... Intensive Livestock Production Operations ..." hearings. These facts are included here so that this resolution is viewed in its proper perspective — not critical of all hearings but only with the first in a new series on water quality. Actually, the purpose of the Council's May, 1977 forum (see Study 10) was to provide information for use by the Commission in its "general" hearing on water quality.

This brief is directed at only one aspect of the Commission's first basin water quality hearings. It is essentially a "fire-fighting" brief as it omits consideration of the entire subject of public participation. However, one suggestion is offered in that both the Commission and the Division should consider the procedures for public participation employed in Alberta. There, as reported in the Council's Sixth Annual Report (p. 57) the procedures employed to involve the public in environmental issues, consists, in part, of a pre-hearing informational stage usually about 10 weeks in length.

In conclusion, the specificity of our recommendation is not to be interpreted as acceptance of the "package" of existing water basin hearing procedures but only as a spotlight on a particularly intolerable facet which will, if allowed to continue, render its worthy objective unattainable.

Water and Waste Committee
A.C. Maniar, Co-Chairman

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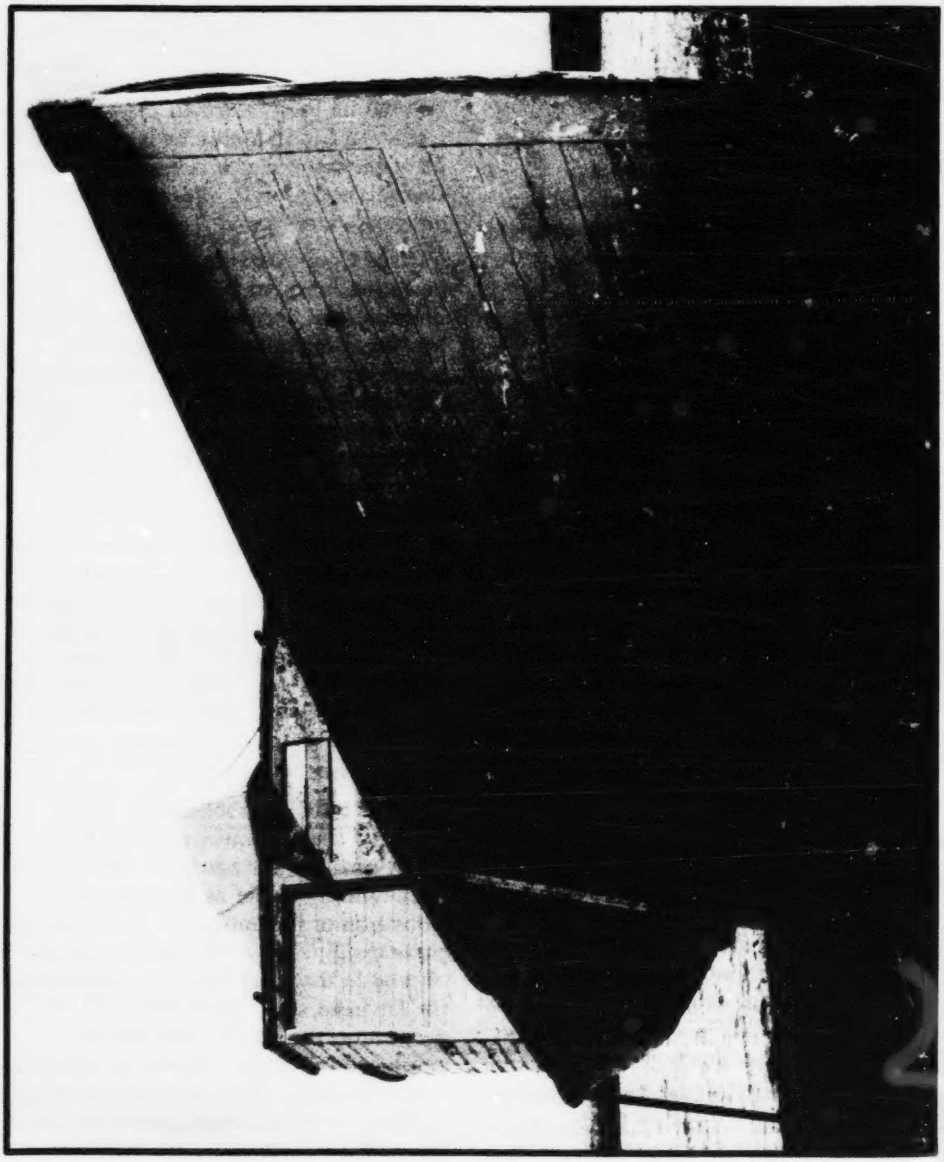
Approved, May 2, 1980 Council Meeting.



WILDLIFE — J.B. NICKELS

The Wildlife Committee considered several ongoing issues relating to the concerns of other committees, but emphasized wildlife. I do, at this point, want to thank the members of the committee, namely Doctors Bennett, Rollo, Stephen, Pruitt, Mrs. Pritchard, Ms. Maurer and Messrs. Sheremeta and Palamarchuk.

The committee has been examining the implementation of the wildlife philosophy which Council passed several years ago, [see **Annual Report Four: 1976** p. **1976** p. **53-55** ed.] and particularly, looking at issues that might relate to this philosophy. At present, steps are being taken to examine the organization under the Hon. A. Brian Ransom's new ministry to see how the Wildlife Committee itself can promote the use of the wildlife philosophy. Its work may be made more difficult now that Mr. Ransom is no longer overseeing our efforts in Council. In addition to this, a revision of the Wildlife Act is in preparation. There have been some steps taken to make the Wildlife Federation and the Manitoba Naturalist Society aware of this. Unfortunately, we in the Wildlife Committee have not been aware of what is happening as far as this revision is concerned. It's my understanding this is about to be tabled in the Legislature. The committee wanted me to report that we will be doing everything in our power to examine it and provide input where possible. Evidently, it has not been widely distributed so far. [Mr. Ransom, in a letter to the Committee dated July 11, 1980 enclosed a copy of Bill 103, The Wildlife Act, which had received second reading on July 10th. Dr. Nickels presented a Committee brief with regard to the Act to the Law Amendments Committee of the Legislature on July 26th — ed.]

The Wildlife Committee is also preparing to participate in the Manitoba Tourism Development Plan, which has invited a Wildlife Committee representative to come before its May 24 meeting in Winnipeg. We will, in fact, present a brief to that meeting regarding this tourism plan.

Other involvements of the Wildlife Committee concern trapping, hunting, etc., but at the present time, our major efforts are in relation to the more general problems of tourism and how we are going to relate to our new Minister. Since many of our concerns still rest with the former Minister, we are examining methods to open better channels for communication.

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Presented May 2, 1980 meeting

RESPONSES TO RESOLUTIONS — DAVID PUNTER

A number of the items that I want to report on have already been dealt with by previous speakers and therefore what I say is going to be somewhat redundant but I think it should be said anyway. What I want to do is to bring you up to date with the responses that have been received in relation to various briefs and resolutions that have been submitted during the past year.

The briefs which were adopted at our last Annual Meeting i.e. on April 27, 1979 were forewarded to the Minister on May 11th. The reply from Mr. Ransom dated August 17th was as follows:

This is in reply to your letter of May 11, 1979 outlining the results of the Annual Meeting of the Manitoba Environmental Council.

The Council's recommendation in respect to Dutch Elm Disease is very timely and I wish to advise that the Department of Agriculture has indicated that they are attempting to have their recently produced film on Dutch Elm Disease shown on television as part of their public awareness program. I am also pleased to inform the Council that this Department has expanded its Dutch Elm Disease program this year to include sanitation and removal of diseased trees outside urban areas, as well as the development of an elm inventory in order to identify disease prone stands. The program expansion will cost approximately $300,000.00.

As a result of representations made to the Department earlier this year, the subject of cattle and wolf conflicts as outlined in the Council's brief is being reviewed by my Department and the Department of Agriculture to define more accurately the causes of recent wolf-livestock problems in the central Interlake. My Department has also undertaken a long-range study of wolf biology, including prey taken, pack movements, etc., but results of this study will not be available for another three years.

There is no question that the intrusion of cattle into wolf range does produce conflict, however, cattle range within the Interlake area is at a premium and there are no other suitable lands on which to relocate present herds. The only viable alternative, therefore, is to minimize conflicts between cattle and wolves. I believe this can be accomplished through selective control programs and improved husbandry on the part of the operators. In this manner the wolf population and the role of wolves in the ecosystem can be maintained.

I have also reviewed the proposed Historic Resources Impact Assessment Guidelines and wish to advise that all projects submitted to the Manitoba Environmental Assessment and Review Agency are as a matter of procedure sent to the Provincial Archaeologist for comment as part of the Environmental Assessment and Review Process. Any and all concerns raised by the Provincial Archaeologist are then considered by the Agency along with other items of concern when the Agency recommends to the Minister whether or not an assessment is required. Where assessments are required, the Agency issues guidelines which are developed in consultation with the Provincial

Archaeologist. I can assure you, however, that I will discuss these guidelines with the Honourable Norma Price since she has recently expressed a desire to provide greater protection for archaeological resources.

In connection with the Garrison Diversion Unit, the position of Canada and Manitoba that inter-basin water transfers are completely unacceptable remains unchanged. I believe that the public is quite well informed on the impact inasmuch as the six-volume report of the Study Board and the International Joint Commission Report provides adequate information on the project and that press coverage subsequent to the International Joint Commission Report has been adequate to keep the general public informed of the various actions the governments of Manitoba and Canada, and of the United States agencies involved in this controversy.

Through you I would like to thank the Council for their recommendations.

I should indicate to the Council that, with the exception of the Garrison Diversion, no further comments were made to this reply from the Minister. The brief on "Preservation of National Areas in Private Ownership" was forewarded to Mr. Ransom on July 3rd. An extensive response was received on September 20, 1979. It read as follows:

This is in reply to your letter of July 3, 1979, enclosing a copy of the brief "The Preservation of Natural Areas in Private Ownership".

There is little doubt that technological advances in the field of agriculture have enabled farmers to convert previously marginal unproductive lands to productive use, however, I believe it is still possible to protect the land and environment from unacceptable levels of erosion and other forms of destruction through good land husbandry practices on the part of the agricultural community. As you are aware, agriculture continues to be one of the economic corner stones of this province and at times this makes it difficult to choose between fostering the enhancement of the productive base and the retention of large natural areas for wildlife habitat, water retention, erosion control, aesthetic values, etc. Decisions of this type will always be difficult, especially in light of the need to produce more food and the potential use of crops as sources of alternate energy. Hopefully, governments can respond in a reasonable manner to these land use pressures as they develop over time.

It is my intent to respond to the recommendations contained in the Council brief in point form, in the sequence in which the recommendations were put forward.

1. *As you are aware, the Province has a marginal role in the deliberations of the Canadian Wheat Board in respect to the setting of quotas, however, we intend to be vigilant and will press for reason and good sense on part of the Canadian Wheat Board should the opportunity present itself.*
2. *The assessment of land by class is theoretically sound but in the practical application of the principle it must be recognized that the legal unit is generally the quarter section or the lot or parcel and of legal necessity, one must average the assessment against the entire parcel. There is undoubtedly room for an improved education process whereby the tax payer is made more aware of the differentials based on soil productivity classifications. Such programs tend to be administratively expensive and may not necessarily be productive in that the desire to honour returns through the development of lands presently held in their natural state may over-ride the increased tax assessment.*
3. *Forgiveness of taxes on land is a Municipal matter and I do not believe that either the Municipal Governments or the Province are in a position to underwrite a large scale of tax write offs. In order to recruit the lost revenue, Municipalities would undoubtedly have to levy higher taxes on production lands or the Province*

itself would hae to seek some means to increase revenue in order to offset the forgiveness of taxes on natural lands. Such a course of action would likely not be palatable to the public at large.

4. *The question of sound agricultural practice being sacrificed for operational efficiency would have to be addressed by the Department of Agriculture. It would appear that a minimum tillage and retention of wind breaks is an educational matter, rather than a policy matter.*
5. *I believe the Departments of Agriculture at both the Provincial and Federal level are presently directing large amounts of time and energy in the area of moisture retention and soil conservation, and there is no doubt that such programs will continue.*

In conclusion, I would advise that we are reviewing many of the Acts and Regulations in an effort to co-ordinate both policy direction and delivery. Your comments on the various Acts and Regulations are acknowledged with thanks.

It probably is worthwhile to record here some information relative to the Environmental Impact Assessment Process in Manitoba. On June 13, 1979, Mr. Oscar Mallory, the Chairman of that Committee wrote the Deputy Minister of the Department, Mr. Paul Jarvis for a list of the projects processed over the past year. A reply was received from Dr. W. George Bowen on July 15. It enclosed a 4 page Table of projects processed to-date. Obviously this material is too lengthy to reproduce here and it has been filed in the project file in the Council office.

Council will also remember that it had adopted a resolution from the 1979 Advisory Councils meeting at Brudenell, P.E.I., regarding a energy conference to be sponsored by the C.C.R.E.M. The Minister, Mr. Jorgenson, advised in letter received December 27, 1979 that "although energy was not specifically discussed at the 1979 annual meeting of the Council of Resource and Environment Ministers, the topic Environmental Effects of Energy Production and Use in Canada' will be discussed at the 1980 C.C.R.E.M. meeting".

It can be inferred that this resolution is not been acted upon with any dispatch since it actually was formulated at the Advisory Councils meeting at Fort San, Saskatchewan — one year earlier than the Prince Edward Island meeting.

The responses now to be reviewed are the ones based on the Council's fall meeting on November 30, 1979 and have been at least mentioned by previous speakers. Perhaps a little redundancy is in order so as to mentally imprint the information more forcibly. The Minister, Mr. Jorgenson, made the following reply in a letter dated January 7th.

Following the November 30th meeting of the Council, I received copies of several resolutions and wish to respond.

*1. **Selkirk Water Supply** — The Town of Selkirk proposed in August of 1975 to draw their raw water supply from the Red River rather than from ground water wells. Permission was granted from the Minister of Health and Social Development, however, there have been concerns that the raw water quality did not meet the guidelines of the Canadian Drinking Water Standards and Objectives.*

We learned that the Town of Selkirk has recently returned to ground well water supply as an interim measure apparently due to an equipment malfunction, and a desire to determine whether ground water wells can provide a sufficient volume to meet all needs of the Town.

*2. **Garrison Diversion Unit Publication** — The Environmental Management Division, in co-operation with the Department of Natural Resources, is contemplating the preparation of an updated booklet relating to the Garrison Diversion Unit and perceived impacts on Manitoba water and environment.*

*3. **Whiteshell Nuclear Research Establishment** — The Whiteshell Nuclear Research Establishment is developing a draft* *energy response plan to deal with on-site problems in the event of an accidental release of radioactive material. Concurrently, a federal-provincial committee has been established to develop a similar plan to be implemented in the event of an off-site release of radioactive material.*

The benefits of constructing an additional exit road from Pinawa could best be addressed by municipal officials, however, it is our understanding that the Town of Pinawa stated that an additional highway is unnecessary.

4. ***Collection and Transport of Hazardous Chemical*** *— The transportation, handling, storage and disposal of hazardous chemicals is a matter of concern throughout Canada. This problem has been recognized by the Federal Government and the various Provincial Governments and several programs are underway to address the concerns.*

The Province of Manitoba is responding to these concerns in a number of ways:

A. Maintenance of a secured hazardous chemical interim storage facility at Gimli Industrial Park.

B. Establishment of hazardous chemical expertise within the Environmental Control Branch.

C. Technical and financial participation with the Federal Government and the Western Provinces in a feasibility study on the establishment of hazardous waste storage, treatment and disposal facilities.

D. Participation in a task force established under the auspicies of the C.C.R.E.M. to review the control of toxic substances.

E. Discussion with private enterprise (Kinetic Contamiants Co. Ltd.) re possible construction of a hazardous waste collection and transfer station in Manitoba.

F. The development of a 24-hour, 7 day environmental accident response program within the Environmental Control Branch.

G. The development of new legislation dealing with handling, storage and disposal of hazardous materials.

H. Cooperation with the Federal Government in the development and implementation of the "Transportation of Dangerous Goods Act".

I wish to assure you and Council members that your recommendations will have ongoing review and appropriate actions taken as they are deemed necessary.

As will be noted, the Minister's response was addressed to all of the briefs considered at the fall meeting except the one relative to the Clean Environment Commissions hearings on water quality. This brief was forewarded to the Minister on February 8 1980 when thanking him for his reply which I have just provided. Mr. Jorgenson responded as follows on February 22:

I have received your letter of February 8th which was accompanied by a copy of your Water and Waste Committee Resolution in respect of "Timing of Water Quality Hearings".

I cannot disagree with your comments on the inadequacy of prior notice of hearings. It is a reasonable request as we are anxious to have a wide expression of opinion presented at water basin hearings; especially the next one which is on the Red River.

I will forward a copy of your Resolution to the Clean Environment Commission with a request that every effort be made to provide you with adequate time to prepare your presentations to these hearings.

It is gratifying to receive an unequivocal response to at least one of our briefs since, as we are all aware, replies to many of them are replete with promises of studies and Committee activities. This concludes my report, Madame Chairman, and I am prepared to respond to questions from the members if there are any.

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Revised presentation at May 2, 1980 Annual Meeting.

MEMBERSHIP — J.F. PALAMARCHUK

The basic responsibility of the Membership Committee is to approve new members and organizations for membership and to recommend the reappointment or termination of existing members. Other general duties of the Committee are to seek out prospective members and to prod some organizations to improve the participation in Council activities of their representatives. The Committee, consisting of Mrs. Schilling, Mrs. Blight and myself, with the assistance of Mr. Keleher, held six meetings during the year for these and other activities.

The main "other" activity was the commencement of an adequate informative brochure on the Council and its activities for recruitment and other purposes. A subcommittee of Mrs. Schilling and Mr. Keleher was formed to compile this material. A preliminary draft of the text was prepared and the general design including preferred illustrations was established. Unfortunately budget constraints forced a temporary halt to the completion of the brochure. In addition, it was decided to modify the type of illustrations so that they would be more pertinent from an environmental view point.

At its last meeting, the Committee tackled the difficult subject of membership participation. It was considered under such headings as recognition of long service, methods to quantify it so as to avoid subjective decisions as to extent, and the relationship of organizations and the degree of participation by its representative. It was decided to recognize in the Annual Report membership list those members who have been on the Council since its formation in January, 1972. During the current year, there were 13 persons who qualify for the status of **charter member.** This is certainly a creditable list and illustrates the devotion of the membership to environmental improvement.

We were, and still are, in short supply of regional representation. It is hoped that the new brochure coupled with a paid advertising campaign will diminish this deficiency. Fortunately we do have some very interested rural members who are an asset to the Council. In fact, attendance at Board meetings is almost inversely proportional to the distance and Board members must travel.

As of March 31, 1980, the Council's membership totalled 82, of which 44 are representatives of organizations. A statistical summary will be provided in the Annual Report. This year, one organization, Council of the City of Winnipeg, terminated its association. However, two new organizations were accepted for membership. They are the Manitoba Association of Registered Nurses and the Manitoba Bar Association. It is a pleasure to record this welcomed participation in our Council.

•••

Revised presentation at May 2, 1980 meeting

SUMMARY OF COUNCIL REPRESENTATION

(Data as of March 31, 1980)

Sex	I[a]	O[b]	T	%
Males	33	35	68	83
Females	5	9	14	17
	38	44	82	100
Region				
Central Plains	1	0	1	1
Eastern	0	2	2	2
Interlake	0	3	3	4
Northern	2	4	6	7
Parkland	1	1	2	2
Pembina Valley	0	4	4	5
Western	2	1	3	4
Winnipeg	32	29	61	75
Total	38	44	82	100

a: unaffiliated members

b: members representing organizations

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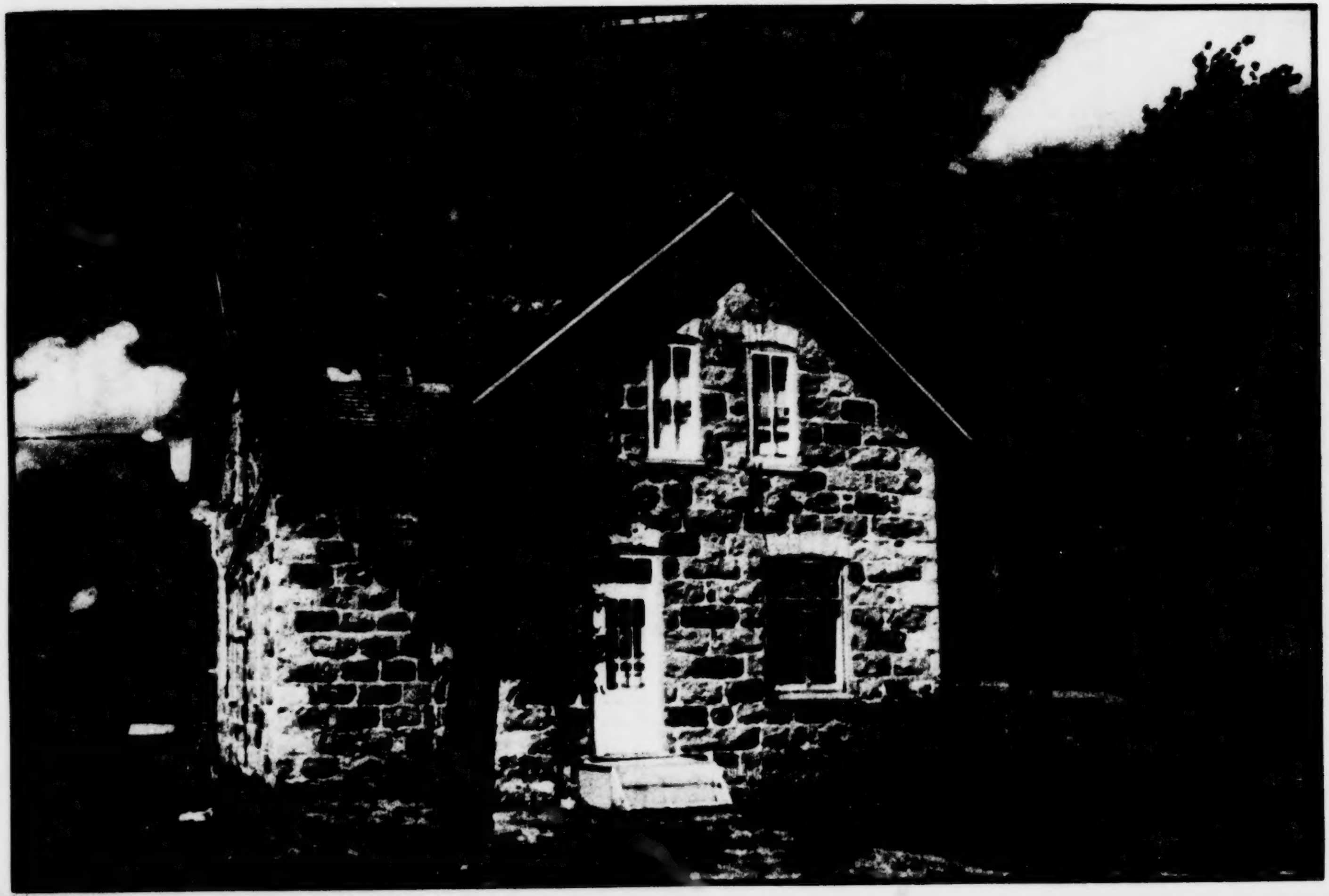
HECLA ISLAND
JKF 79



PUBLICATIONS — DENIS RINGLAND

It is a pleasure to report on the activities of the Committee at the fall meeting of the Council on November 30, 1979. As you are aware the Committee is responsible for the preparation of publications, their distribution and also is in charge of the Environmental Cartoon Contest.

With regard to publications, some progress was made with three of them. With respect to Annual Report Seven, the art work for the cover was completed, at no charge to the Council, by Ms. Jan Moirer. Mr. Oscar Mallory has provided the theme pictures. This is the first Annual Report in which there has been an integration between the cover, the theme pictures and a Council brief. This obviously is a desirable feature. Subsequent to the presentation of our forum on Manitoba Parks, Parks Canada published their parks policy. We have received permission to insert an appendix to our Parks Study containing a portion of this policy. Previously a decision was made to publish the Council's "forum" on South Indian Lake held in 1973. Professor Newbury, one of the speakers, has advised that he will edit his portion of the transcript and also provide a set of the illustrations. This assistance is appreciated and doubtlessly will improve this publication.

The distribution of publications is a second concern of the Committee. To extend their influence, Manitoba senators have been added to our mailing list. A favourable response to this action was received from Senator Gil Molgat. He also requested the latest information on the Garrison Diversion project which was supplied. Previously it had been the practice to send the Annual Report to current and immediately past members of the Council. Now only current members will receive a copy and the others will receive one if a request is received. Recent Council publications are being placed on microfiche by Micromedia Limited, Toronto. Copies of the microfiche are available by purchase from the company and a set is being placed in the Environmental Management Division Library. Notice of some of our publications are being circulated on cards distributed by the Intergovernmental Committee on Urban and Regional Research. This additional notice resulted in at least 28 additional requests for our Study 12, **Winnipeg 100: Alternative Futures.** This additional publicity is appreciated as it makes others aware of our published material.

Planning for the forth annual cartoon contest, under the direction of Mr. Gunter Schoch is well in hand. In addition, there will be a display of previous cartoons in Winnipeg and in Brandon. A suggestion by Mr. Chris Sundevic that our cartoons be displayed in Thompson and perhaps other northern points could not be put into effect because of budgetary constraints. A display in this region will be attempted next year.

Several other decisions were taken by the Committee. It was agreed that the theme of the next Annual Report would be Hecla Island because it was the site of the meeting of the Federal Provincial Environmental Councils which was sponsored by our Council. A new design is required for our Study Series. The original art work has been lost which consequently provided an opportunity for a new format. Professor Dore of the University of Manitoba has consented to act as our graphics advisor. His experience in this field will be of value to the Committee. Lastly the Council has applied for two students for the 1980 STEP program. One student is being solicited to assist in the preparation of publications.

The substance of my presentation as Publications Chairman at this Annual Meeting on May 2, 1980 deals more with prospects than accomplishments. Our high hopes for the completion of several publications were not realized. Two were issued. Study 12 on Environmental Education was published in May 1979 and Annual Report Seven has just been issued. While we are pleased that these have been completed, it must be reported that negligible progress was made on other manuscripts — Manitoba Parks; Red River Flooding and South Indian Lake. Therefore we have fallen behind as it was expected that at least some of these would be published in the current fiscal year. This is an undesirable situation and I recommend that the Committee immediately plan methods to catch up in this area. The longer the delay in completion of publication, the more difficult it becomes to finish it.

A new series of publications has been proposed. The impetus was our informational pamphlet on the Council, obviously a desirable item. The thought, not ratified by the Publications Committee, is that the new series would be established to contain transitory or ephemeral material. The format therefore would not be as elaborate as the Study Series. The informational pamphlet might be one item in the series, the proposed Garrison Diversion Bibliography a second. Council briefs that are likely to have a considerable demand could also be included in it. Obviously much more consideration must be given to this idea in order that it can be launched without unduly affecting other Council activities.

On the subject of distribution, our exchange or "trader" program should be strengthened. This serves two purposes — other organizations obtain our publications and we obtain theirs. Obviously we would like to exchange with productive organizations so that we get more for less.

I believe you will agree that our Annual Reports have reached a desired graphic standard. Within the limits of our financial resources, only minor changes can be accomplished in the future. Probably one area can be improved without additional cost. This is in the style of the reports. Understandably some of the reports do not lend themselves to dramatic presentation but perhaps they could be written in a more readable style. The cartoons and other illustrative material may encourage the reader but if the text is not basically interesting then he will not persist. This suggestion should be considered by our author's so as to improve our publications.

Our cartoon contest has reached a sizeable scale and I will not discuss this subject further. Remarks will be provided by our capable co-ordinator, Mr. Gunter Schoch.

This concludes my remarks. I wish to thank the Committee members for their assistance. It's been a very interesting year for me as publications usually consume the largest portion of the Council's budget.

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Summary of reports to November 30, 1979 and May 2, 1980 Council meetings.

ENVIRONMENTAL CARTOON CONTEST –

GUNTER A. SCHOCH

Today, the highlight of another Environmental Cartoon Contest, is at hand, namely the presentation of prizes to the winners. This is the fourth contest sponsored by the Council and I would like to take this opportunity to present a brief report on this successful endeavour of the Publications Committee.

The prime responsibility and workload for the contest rests on the Executive Secretary, who is assisted by an appointed co-ordinator. Planning meetings commenced in September, 1979 and continued until February, 1980 to arrange the necessary details for exhibits of previously submitted cartoons, preparation of posters and advertisements for exhibits and new contest and judging of the 1980 submissions.

While the cartoon display was previously only exhibited in Winnipeg, this time an exhibit was arranged in Manitoba's second largest city. A February 2 advertisement in the two Winnipeg daily newspapers announced a 17 day cartoon show in the Provincial Archives Building from February 4-22nd. The Brandon Sun carried advertisements on February 9th and 13th to announce the display of 50 cartoons at the Brandon Shopping Mall from February 11th - 16th. This exhibit, viewed by hundreds of shoppers, was arranged through the invaluable assistance of Council members Chris MacDonald and Nancy Cornish.

In addition, a display of 25 cartoons, as well as a selection of Council publications, was exhibited in the Elizabeth Dafoe Library (University of Manitoba) from March 17 - 31st. Our thanks for this publicity are extended to Mr. Michael Angel, Head of Reference Services and Ms. June Dukta, Head of Government Publications. A request for a display of cartoons was also received from the Northern Chairman, Chris Sundevic, but could not be undertaken. Hopefully, a display can be arranged in Northern Manitoba next year.

Aside from newspaper advertisements, two sets of posters, describing the exhibits and the contest, and a postcard of contest rules were distributed to all school principals and public libraries in Manitoba. For the first time, all 96 Winnipeg Community Centres were provided with this information. Publicity regarding the contest was also carried, without cost, in the *Manitoba Teacher, Public Library Services Newsletter, University of Manitoba Bulletin, the Manitoban* and *News Notes* of the *University of Manitoba Libraries.* The April 5, 1980 issue of the *Tribune Magazine* carried a two page feature, with text and 5 cartoons.

The closing date for the contest was established for March 31, while the judging was carried out on April 9th by Ms. Jan Christiani, Winnipeg Art Gallery, Entries for 1977 - 1980 Environmental Cartoon Contest. Percentage in parenthesis.

Group	Category	1980	1979	1978	1977	TTL
1	Open	26 (5)	27 (5)	46 (8)	48 (6)	147 (6)
2	Grades 10-12	35 (7)	33 (6)	19 (3)	24 (3)	111 (5)
3	Grades 7-9	148 (31)	209 (39)	188 (34)	264 (35)	809 (35)
4	Grades 4-6	274 (57)	272 (50)	298 (53)	423 (56)	1267 (54)
	Unknown	0 (0)	0 (0)	8 (2)	0 (0)	8 (0)
	Total	483 (100)	541 (100)	559 (100)	759 (100)	2342 (100)

Mr. Peter Kuch, Winnipeg Free Press and Mr. Jan Kamienski, Winnipeg Tribune. By the prescribed closing date, 483 submissions were received.

The comparative annual figures indicate a larger percentage of cartoons submitted in the Grades 10 - 12 and Grades 4 - 6 categories, which are with 7% and 57% at the highest level ever submitted. While the open category remains at last year's level, 5%, the Grades 7 - 9 groups dropped to 31%, the lowest percentage recorded to date. The geographic locations of origin are known with regard to all groups submissions from schools. They came from about 18 different centres in Manitoba. The cartoon display in Brandon did not have a significant effect on the number of submissions from this particular area, as only one group submission of 11 cartoons was received. However, the exhibit did make the existence of the Council known to many who previously were unaware of it. The environmental concerns expressed by the cartoonists were examined. Preliminary observations indicate that the Grades 4 - 6 category generally perceives litter as the major environmental problem. Further analysis may actually allow us to determine the cartoonists' majority perception of the environment and environmental problems, which may be useful in directing or re-directing future environmental efforts.

This review of the contest is merely a prelude to the awarding of the prizes which will now take place.

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Cartoon judge, the late Mr. Peter Kuch.

CARTOON CONTEST WINNERS — L. PROUT

The Minister was looking forward to the awarding of prizes to the environmental cartoon contest winners, and I am sure that I speak for him in expressing his regrets at not being here today. Fortunately I did not have to decide from amongst the nearly 500 entries, the ones which would be awarded a prize today. Those decisions were made by three experienced judges, Ms. Jane Christiane of the Winnipeg Art Gallery, Mr. Peter Kuch of the Winnipeg Free Press and Mr. Jan Kamienski of the Winnipeg Tribune. You may be unaware, as I was until recently, that Mr. Kamienski has received the Distinguished Canadian National Newspaper Award, presented annually, for the "best political cartoon of the year."

Environmental and political cartoons are very similar in some ways. They both could be defined as "the shout of the people." It has been said that political cartoons often stay alive long after the columns of print have been lost. The words fail but the pictures still speak. As I looked at the eight winning cartoons, I thought that quotation was rather appropriate.

I commend you on the pertinence of your subject matter. Acid rain and nuclear energy underground disposal have recently gained public attention, and aptly enought they are amongst the winners and other entries. The cartoons on vinyl chloride and oily polar bears are subjects which my Minister and the Hon. Brian Ransom have learned a great deal about recently. As to the artists who skillfully illustrated these topical subjects I'll also be making awards to you in a few minutes.

It is unfortunate there cannot be more financial winners. However, some of the other contestants will find their cartoons utilized in Council publications, re-printed elsewhere or displayed in the Council's recent and future exhibits. That would be gratifying I'm sure since all of us like to have our work displayed.

But it's time now for the spotlight of success to shine on you, the adjudicated winners of the Council's 1980 Environmental Cartoon Contest. I would now like to call each of you forward in turn to receive the Council prize.

Winners announced by Mr. Prout are listed in Table 1.

1980 ENVIRONMENTAL CARTOON CONTEST WINNERS

Grp.	Category	Prize ($)	No.	Name	Location
1	Open	1st - 150	80001	George F. Wauchope	Winnipeg
		2nd - 50	80002	John R. Stangroom	Winnipeg
2	Gr. 10-12	1st - 50	80027	Brett Mitchell	Sturgeon Creek School, Wpg.
		2nd - 25	80028	Bill Brown	Sturgeon Creek School, Wpg.
3	Gr. 7-9	1st - 50	80089	Clayton Wieler	Morris
		2nd - 25	80090	Gord Anderson	Morris
4	Gr. 4-6	1st - 50	80119	Brad Huebert	Hastings Elementary, Wpg.
		2nd - 25	80120	Joey Cooper	Gladstone Elementary, Gladstone

1980 Cartoon Winners
back: J. R. Stangroom, Brett Mitchell, Bill Brown, Clayton Wieler *front: Brad Hubert, L. Prout, G. F. Wauchope, Gord Anderson* *insert: Joey Cooper*

ENVIRONMENTAL ADVISORY COUNCILS —

ONNO KREMERS

As Chairman of the organizing Committee of the 4th Joint Meeting of Environmental Advisory Councils held at Hecla Island last June, it gives me pleasure to report on the activities and conclusions of that meeting. It was sponsored by our Council and, in spite of severe budget limitations, was deemed by most participants and delegates to have been a very successful endeavour.

Some 35 delegates attended, representing the Government of Canada and all Provinces except two. As well, 13 speakers made presentations and acted as resource persons during the conference. An organizing Committee was established to develop the program and the other activities such as transportation and accommodation required for the meeting. The Committee members consisted of Peter Aitchison, Denis Ringland and J.J. Keleher. Their keen participation was appreciated. Some 13 topics were considered for the conference and finally were reduced to two — the question of hazardous materials and hydro-electric development. In the final analysis, selection of these two main topics proved to be very timely and in context with the general state of environmental quality in Canada and the priorities of individual Councils.

The question of hazardous materials was certainly seen as the priority item. In addition to the prepared papers, there was a presentation by the then Acting Deputy Minister of the Environmental Protection Service of Environment Canada. The subject of pesticides in water was discussed by Dr. W.L. Lockhart of the Freshwater Institute. Responsible waste management was considered by Mr. G.A. Gerke of Kinetic Contaminants Canada Ltd. and Dr. F.A. Henning and Mr. L.A. Johnson of W.L. Wardrop and Associates Ltd. John Ashton of INCO reviewed the hazardous waste control program for his company's operation at Thompson, Man. The legal and political implications of the use of such materials was covered by Dr. Ross H. Hall from McMaster University in Hamilton. The remaining time on this topic was spent in workshop sessions, which dealt mostly with the implications of provincial action on the use of hazardous materials.

Three presentations were made on hydro-electric developments. Mr. Gordon Spafford of UNIES Ltd., Winnipeg spoke on Interprovincial Power Grid and Environmental Consequences. The second paper dealt with Economic and Environmental Factors For and Against Hydroelectric Schemes. It was given by Dr. L.M. Wedepohl of the University of Manitoba. Finally Dr. R.W. Newbury of the Freshwater Institute discussed the Effects of Hydro Development on Rivers.

Although the actual content of the

various presentations and discussions are too voluminous to present here at this meeting, I would urge Council members to read the report of the proceedings available from the Council office. We are indebted to Miss Veena Halliwell and Dr. J.K. Fraser of the Secretariat of the Canadian Advisory Council for assembling and editing this report. I urge you to do this not only because it is interesting reading but particularly in light of the recent accident in Manitoba, the MacGregor spill and the recent incident in the CPR yards in Winnipeg. Different Councils have addressed the problem from different perspectives and their insights into the problem might well serve some useful application here in Manitoba.

The resolutions of the conference are not binding on individual Councils. However they do constitute the unanimous consensus of the representatives of all Councils gathered at Hecla, and, if ratified by individual Councils would be presented to the individual Ministers.

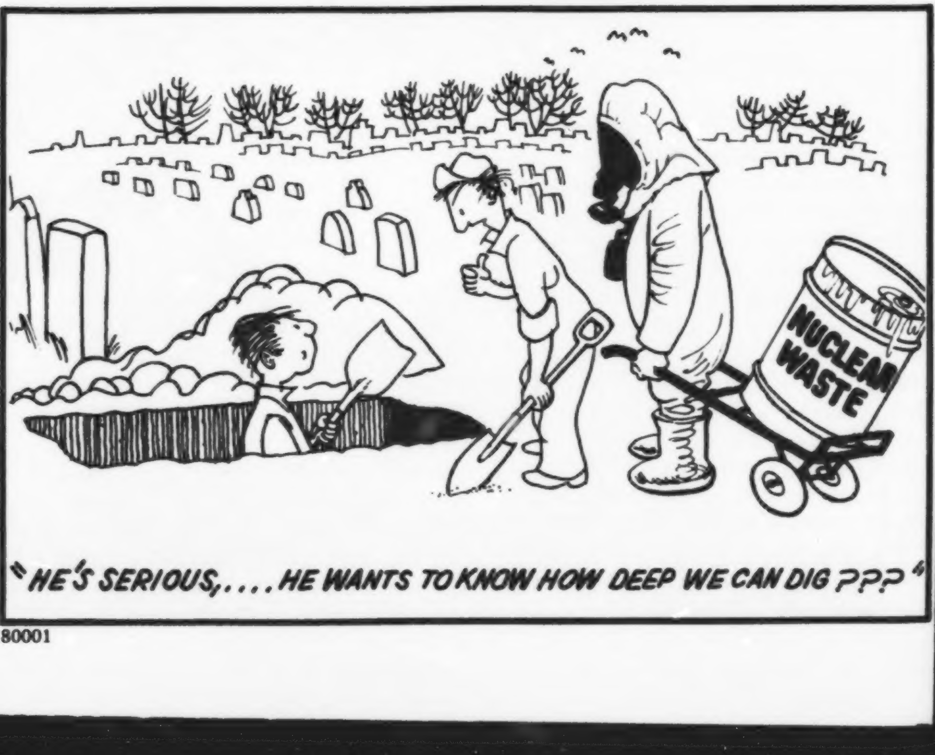
I believe that some of these resolutions were presented in a nonformal fashion to the Minister, and if they haven't been presented formally, perhaps this meeting should consider their presentation at some future date. They are still fairly relevant.

There were numerous resolutions dealing with a variety of topics which are reproduced in this Annual Report [p. 84-85-ed]. Other activities at Hecla included an early morning bird watching session following an avian slide show by Mr. Rod McCharles of the Parks Branch, a mixer with entertainment by Len and Karen Xopnfiord, and the traditional banquet with Mr. Len Domino, M.L.A. providing "Greetings" from the Province. Ms. Barbara Deans from the staff of the Environmental Management Division rendered excellent secretarial services.

I stated initially that it was a successful endeavour. This can be repeated as my conclusion.

* * *

Presentation (revised) at May 2, 1980 Counçil Meeting.



"HE'S SERIOUS,.... HE WANTS TO KNOW HOW DEEP WE CAN DIG ???"

80001

EXECUTIVE SECRETARY — J.J. KELEHER

It's novel situation for me to be making remarks from the speaker's podium at a Council meeting. I usually operate way back in the area of the last floor microphone. How it happened is interesting. Last year, I casually asked our Chairman if she would like some notes for her fall report. Mrs. Malaher turned and quietly stated, "No — I'll write my own. If you want to say anything, put yourself on the agenda". I couldn't take up her offer then because of the pressure of the flooding forum. So today the Chairman's remarks are again her own and these are mine.

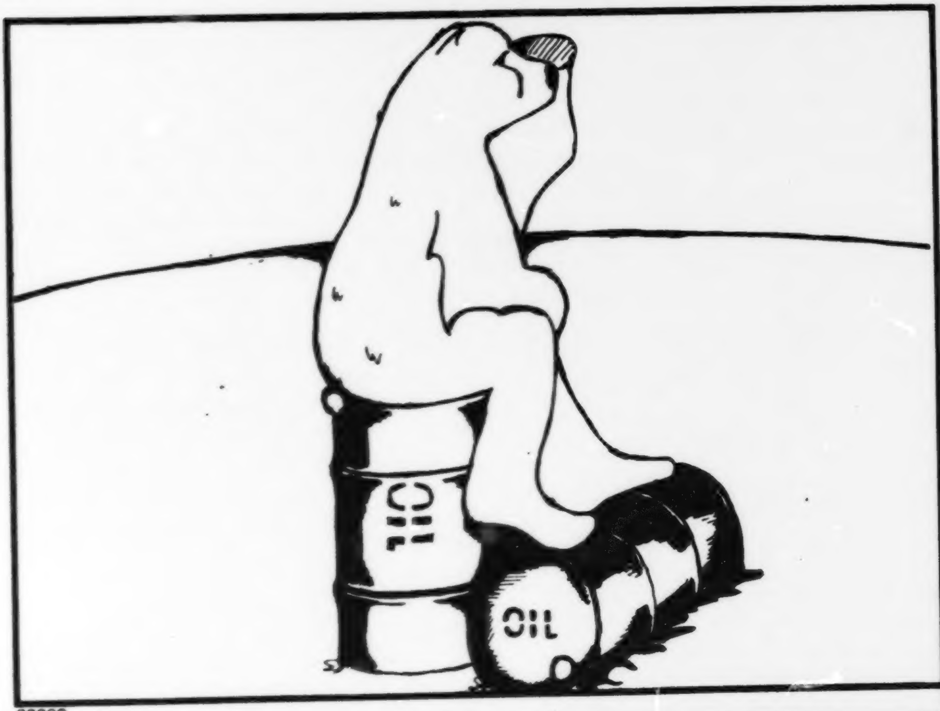
What a wonderful opportunity — a civil servant with a receptive audience. The Environmental Chemicals Committee's recommendation regarding the handling of enquiries in the case of hazardous accidents is coming true even before the adopted brief reaches the Minister. I could talk about catastrophies within the Service. These doubtless occur in private business as well, so that would not be too interesting.

Allow me to speak about the future. Not the world 2000 future so dearly beloved by academic symposium planners, but the present future — the 1980s. Not the 1980s for Manitoba or the Department but let me zoom in on the 1980s for our Council — what it must be if the Council is to maintain and not lose its effectiveness.

This "present" future, according to Northern Telecom Ltd., involves "The age of information". During the 80s, they will work on the software for the communications revolution — the machinery or hardware was put in place in the last two decades. As a result, Telecom believes "Subject only to society's controls, the intelligent Universe will be an ever-changing information library, a giant calculating machine and a nearly limitless communications channel, to be used by virtually anybody who needs or wants to use it". Information, they say, will be waiting for a pressed button. There must be some validity to their prediction. At Headingley, about 100 homes are now being rigged for Ada — is that the name of the first telephone operator? — which will provide the weather, warn the fire department if more than cigarette smoke is present in a room and a variety of other services.

Where is the Council now? It's most sophisticated information hardware is a hand calculator, a typewriter and a duplicating machine. The Council office has to respond to the ever increasing internal and external demands by working harder and longer. Professional staff tolerates this situation better than secretarial or administrative because the former receive or take such fringe benefits as freedom in working hours, peer recognition etc. Unfortunately, salaries of secretaries and clerks, in bureaucratic organizations, are determined mainly by status of their supervisor. No differential is paid if you become assigned to a "workaholic".

The Council's dilemma is solveable —



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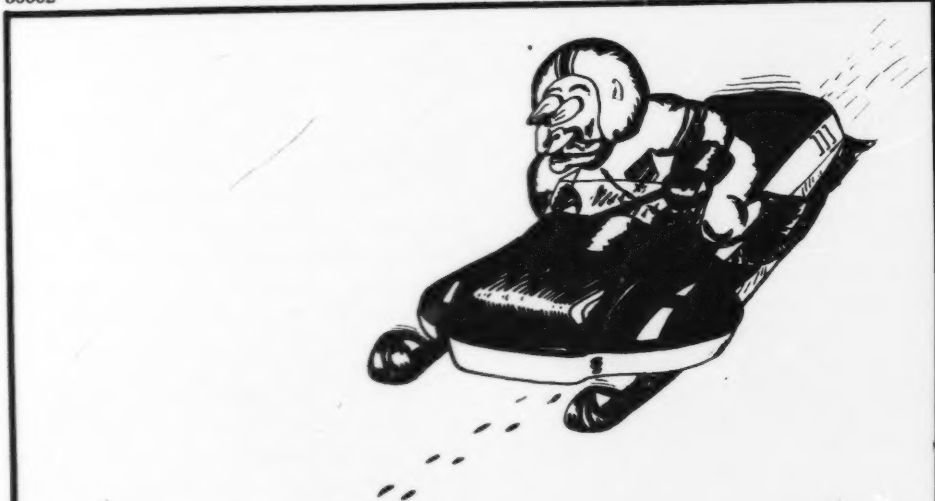

80027

become capital intensive as staff ceilings prevent the addition of more "manpower". Several areas of Council operations could immediately benefit from the application of existing computer techniques — mail, finances and incoming publications. Brief explanation will hopefully clarify my point.

With regard to mailing, the Council has about 10 member lists ranging from an overall Council list to one for its smallest committee; a publicity list in about five parts and a list of persons or institutions who receive our publications. A change in any statistic in any list currently requires manual changes. The membership list is the most volatile. It's a real chore to keep it and its various subdivisions accurate. You probably wonder why we can't seem to correct an error in your name, change your phone number. After the membership list goes through so many changes (revisions) that its alphabetic sequence is destroyed, a new edition is attained by a complete retyping. Its first use demonstrates human fallibility — digit inversion, wrong spellings missed because of too much familiarity with the subject matter. Obviously a computer generated list with update and edit features would eliminate the majority of these problems. Then even monthly changes in your address, etc. could be handled quickly and correctly.

Finances represent other challenges. As I prefer to utilize my time allotment on the next problem, all that needs to be said is that it has theoretically been solved by FOCUS (Financial Object Code Upstart Statistics).

I really want to talk incoming reports, papers, etc. The amount now arriving at the Council office, with few deliberate efforts to obtain the proper amount, prohibits anything but a glance and a pious, usually unfulfilled hope to read it later. Having faced this problem throughout my working life, I finally found a solution. It even has been published (Keleher and Marshall, 1976). Yes, it utilizes the computer.

The mind is a most complex and occasionally an unpredictable machine. Sometimes, it instantly produces irrelevant trivia; at other times, it only produces indefinite facts about significant subjects. Here's a very pertinent example. This year, C.M.H.C. published a study on Winnipeger's attitudes to their city. I clipped the relevant news article and sent it to Mr. Palamarchuk, Winnipeg Regional Chairman. A copy of the publication subsequently was received, catalogued in the library, lent to Mr. Palamarchuk and returned. Last week, while disccussing the subject of the Winnipeg region, we wanted to look at the publication again. It still hasn't been found.

But yet information that the Council requires doesn't always come in the mail. How is it usually found? Three ways are the usual methods — phone the librarian, talk to associates or visit the library. They are listed in the order of time expenditure. Actually, library browsing is the most interesting, but it might take a whole afternoon to locate one book. In 1½ days last week, I became aware of an operational solution. It is called CAN/OLE, meaning Canadian Online Inquiry. After lunch on the second day, I formulated three questions and then sat down before a typewriter-like terminal and in less than one hour found out the following:

1) No. of Garrison Publications known by U.S. Fed. Government
2) Keleher published an article on Great Slave Lake
3) The Council has published six studies and one brief and they may be borrowed from the Toronto Legislative Library.

This system is so sophisticated and easy to use that I'll wager anyone that if we had a computer terminal here and the

Dafoe Library was on the main floor, that I could verify the title of a book faster than the other person could by consulting the library.

So what's the application. The Council now has the capability of responding to regional demands for environmental information on any topic conceivable.

This is the kind of equipment that the Council needs in the 80s future.

I must not conclude my first report without expressing my view about working for the Council — It's great. Sure, there are times when so many things are overdue that I am inclined to wish I had never heard of Box 139, 139 Tuxedo; to disconnect the telephone, close the door, to stop the mail and wish that I was back studying whitefish at Great Slave Lake. These are the bad days. But the good days more than make up for it — like right now. The Council is in session, making pronouncements, having an impact on the environment. While some think that we are getting a cold shoulder, we are having an effect. The long hours of Committee work do have a payoff. Like the tide, environmental concerns will again rise from its neap. This Council will be instrumental in protecting and enhancing the Manitoba environment. We and other environmental organizations can call Stockholm our birthplace. I don't think, if we continue to improve as we have, that the M.E.C. will ever have to order a headstone.

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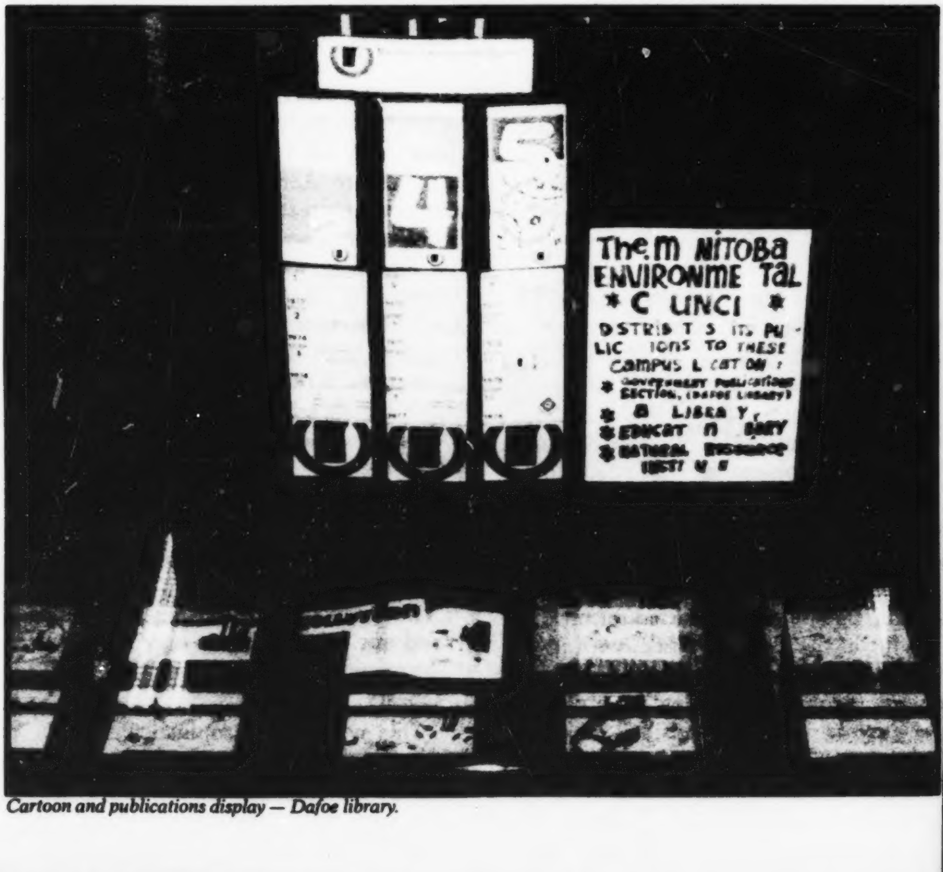
Presented at May 2, 1980 meeting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The M NITOBA
ENVIRONME TAL
* C UNCI *
DSTRIB T S ITS PU-
LIC IONS TO THESE
CAMPUS L CAT ON :
* GOVERNMENT PUBLICATIONS SECTION, (DAFOE LIBRARY)
* LIBRA Y
* EDUCAT N RARY
* NATURAL RESOURCES INSTI U E

Cartoon and publications display — Dafoe library.

NOMINATING — DAVID PUNTER

At its meeting of March 5, 1980, the Board of Directors elected David Punter as Chairman of the Nominating Committee and proposed several other members. Mrs. Nancy Cornish and Mr. H. Bloy accepted and completed the Committee. The Committee's task was to propose a slate of executive officers and regional chairmen for election at the annual meeting. As no other nominations were received, the Committee's selections were elected by acclamation. However, Dr. G.R.B, Webster was elected Vice-Chairman without his explicit approval. Subsequently he found that he could not fill the office in the manner which he felt it deserved because of prior commitments and he resigned. Prof. John Selwood was appointed by the Board. A list of the elected positions for the Council's 1980-81 term follows:

Chairman	- Basil Rotoff
Vice-Chairman	- John Selwood
Secretary	- A.C. Maniar
Central Plains	- J.A. Knight
Eastern	- R.D. Howard
Interlake	- Bill Aitken
Northern	- Chris Sundevic
Parkland	- Elizabeth Pawlicki
Western	- G.A. Dagg
Winnipeg	- J.F. Palamarchuk

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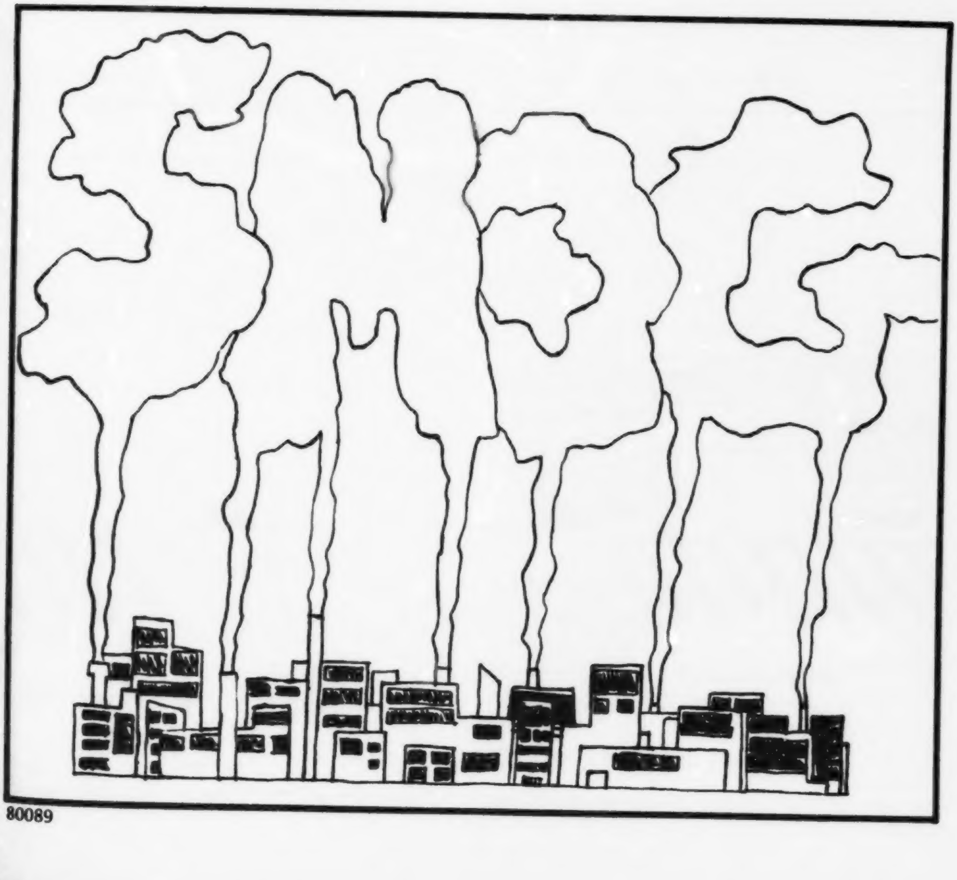

HONOURARY MEMBERS

Honourable A. Brian Ransom
Minister of Mines, Natural Resources and Environment.
(To Nov. 15, 1979).
Honourable Warner Jorgenson,
Minister of Consumer and Corporate Affairs and Environment.
(From Nov. 16, 1979).
Mr. Paul E. Jarvis, Deputy Minister,
Department of Mines, Natural Resources and Environment.
(To Nov. 15, 1979).
Mr. J.E. Mason, Deputy Minister,
Department of Consumer and Corporate Affairs and Environment.
(From Nov. 16, 1979).
Dr. W. George Bowen, Assistant Deputy Minister,
Department of Consumer and Corporate Affairs and Environment.
Miss Catherine Howlett, Reg. N.A.P.,
Parliamentarian.

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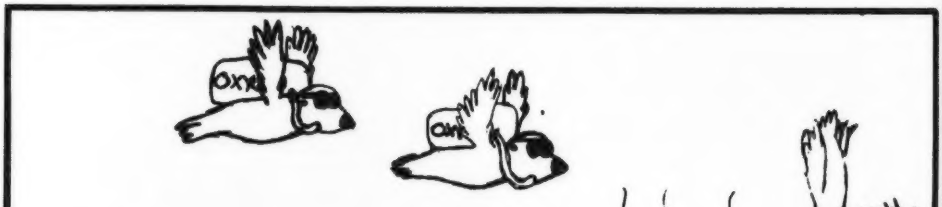

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COUNCIL MEMBERS

(Unless noted, membership is for a period April 1, 1979 — March 31, 1980; Asterisk denotes "charter" member)

Dr. P.W. Aitchison, *Winnipeg**

Mr. W. Aitken, *Arborg*

Mr. M.S. Antonation, *Shoal Lake*
(From Nov. 1, 1979)

Ms. Lynn Batten, *Winnipeg*
(To Sept. 28, 1979)

Mr. Alan Beachell, *Rosser*
(To Nov. 1, 1979)

Mr. Alan Beaven, *Winnipeg*
(From Jan. 31, 1980)

Mayor Charles Balcean, *Selkirk*

Dr. William Bell, *Winnipeg**

Mr. C.P. Bennett, *Winnipeg*

Mr. H. Bloy, *Winnipeg**

(Mrs.) Donna Blight, *Winnipeg*

Mr. Ivan Brown, *Miami*
(From Nov. 8, 1979)

(Mrs.) Nancy Cornish, *Brandon*

(Mrs.) Kay de Jong, *Winnipeg*
(From Sept. 28, 1979)

Mr. Harold Driedger, *Winnipeg*

Mr. Frank Elvers, *The Pas*

Mr. Art Erickson, *Winnipegosis*
(To Jan. 17, 1980)

Dr. W.S. Evans, *Winnipeg*

Mr. Wes Finlayson, *Winnipeg*

Mr. Dale F. Fuga, *Winnipeg*
(From Feb. 6, 1980)

Mr. Martyn Glassman, *Winnipeg*
(To Jan. 17, 1980)

(Mrs.) Sophie Gordon, *Winnipeg*
(To Nov. 15, 1979)

Mrs. U.A. Grant, *Winnipeg*

Mr. Gerald D. Harder, *Carman*

Mr. David Hatch, *Winnipeg*

Mr. Yude M. Henteleff, *Winnipeg**
(To Jan. 17, 1980)

(Mrs.) Louise Hewson, *Portage la Prairie*
(To Jan. 31, 1980)

Mr. Garry Hilderman, *Winnipeg*
(To Jan. 31, 1980)

Mr. Denis Hindson, *Thompson*

Mr. Colin Holbrow, *Winnipeg*

(Mrs.) Grace Holloway, *Winnipeg*

Mr. R.D. Howard, *Carman*

Mr. J.F. Humphries, *Winnipeg*

Mr. Robert Imrie, *Flin Flon*
(From Jan. 17, 1980)

Mr. John Jack, *Winnipeg**
(To Jan. 17, 1980)

Mr. Joe Jones, *Winnipeg*

Councillor Anne Jorowski, *Winnipeg*
(To April 6, 1979)

Professor F.M. Kelly, *Winnipeg**

Mr. Hans Kerr, *Winnipeg*

Mr. Edward Klassen, *Homewood*

Mr. J.A. Knight, *MacDonald*

Mr. Onno Kremers, *Winnipeg*

Dr. A.M. Lansdown, *Winnipeg*

Mr. Maurice Lanteigne, *Flin Flon*
(To Jan. 17, 1980)

Mr. E. Lovelace, *Winnipeg*

Mr. J. MacDonald, *Brandon**

(Mrs.) Dawn MacFarlane, *Selkirk*

(Mrs.) Rosemary Malaher, *Winnipeg*

Mr. Oscar L. Mallory, *Winnipeg*

Dr. Dianne Malley, *Winnipeg*
(From Feb. 14, 1980)

Dr. A.C. Maniar, *Winnipeg*

Ms. Jane Maurer, *Winnipeg*
(From May 15, 1979)

Mr. Lewis McCall, *Winnipeg*

Mr. Tom McLaughlan, *Winnipeg*

Dr. D. Muir, *Winnipeg*

Mr. Laurie Nairn, *Winnipeg*

Mr. Wayne Neily, *Winnipeg*
(From Jan. 17, 1980)

Dr. J.B. Nickels, *Winnipeg*

Mr. Roland Painchaud, *Winnipeg*

Mr. J.F. Palamarchuk, *Winnipeg**

(Mrs.) Gwen Parker, *Ste. Agathe**

Mr. H. Patterson, *Winnipeg*

Mrs. Elizabeth Pawlicki, *Winnipegosis*

Mr. Alex Penman, P. Eng., *Winnipeg*

(Mrs.) Joanne Pritchard, *Winnipeg*
(From Nov. 15, 1979)

Mr. Harold Proven, *Basswood*
(To Nov. 8, 1979)

Dr. William O. Pruitt, Jr., *Winnipeg**

Dr. D. Punter, *Winnipeg*

Mr. A.H. Richardson, *Thompson**

Mr. Denis Ringland, *Winnipeg*

Dr. Carl Ridd, *Winnipeg*
(From Feb. 25, 1980)

Dr. I.M. Rollo, *Winnipeg*

Mr. John L.S. Ross, P. Eng., *Winnipeg*

Professor Basil Rotoff, *Winnipeg*

Mr. A. St. Hilaire, *St. Jean*

Mr. Ivan Sabesky, *Winnipeg*

Mrs. R. Schilling, *Winnipeg*

Professor H.J. Selwood, *Winnipeg*

Mr. Eugene Sheremeta, *Winnipeg*
(From May 15, 1979)

Dr. Jennifer Shay, *Winnipeg*
(On leave Sept. 15, 1979)

Mr. John Silver, *Winnipeg*

Dr. Lawrie B. Smith, *Winnipeg*

Dr. L.S. Stephen, *Dauphin*

(Mrs.) Karen Stonyk, *Winnipeg*
(From Jan. 17, 1980)

Mr. Chris Sundevic, *Thompson*

Mr. Rakesh Syal, *Winnipeg*
(From Feb. 14, 1980)

Mr. W.H. Toews, *Lowe Farm*

Dr. W.J. Turnock, *Winnipeg*

Mr. Walter Von Schoenhausen, *Winnipeg*

Mr. H.A.H. Wallace, *Winnipeg**

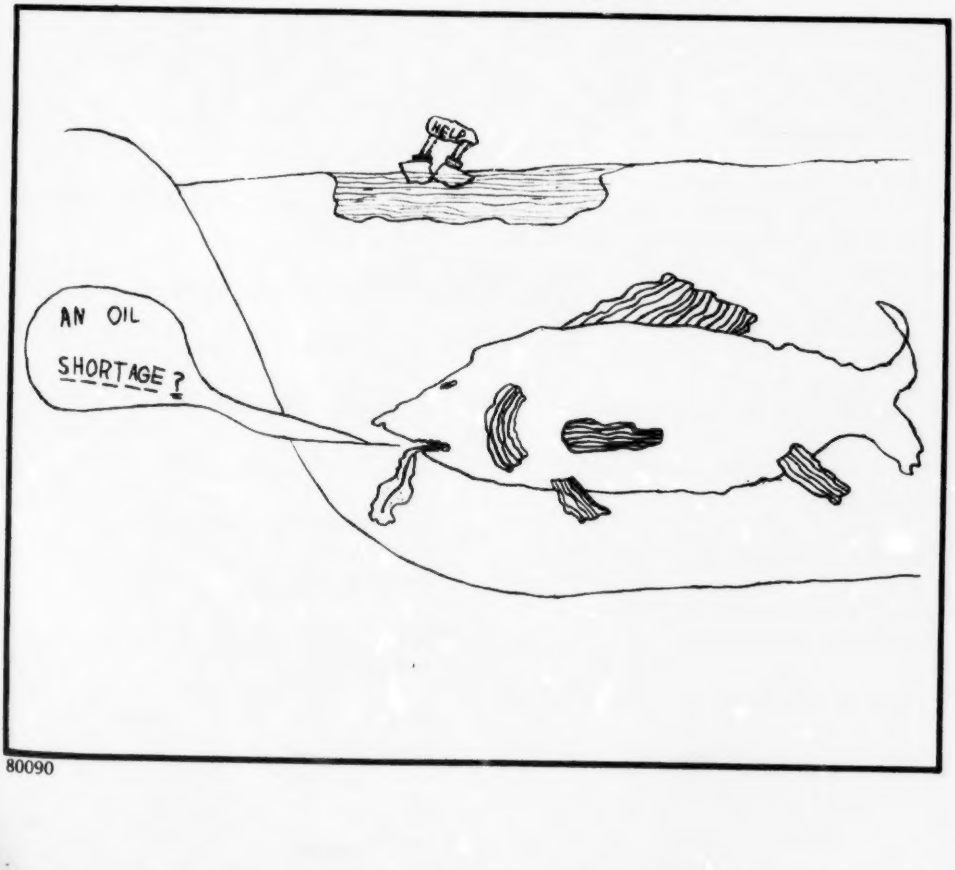
(Mrs.) Marj Ward, *Dugald*
(To Jan. 17, 1980)

Dr. C. Peter Warren, *Winnipeg*

Dr. G.R.B. Webster, *Winnipeg*

Mr. I.H. Wiseman, *Winnipeg*

Mr. Barry Wild, *Gillam*



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COUNCIL ORGANIZATIONS

(unless noted, membership is for period April 1, 1979 - March 31, 1980)

Association of Manitoba Archaelogists.

Canadian Manufacturers Association

Canadian Society of Mechanical Engineers (Man. Region)

Carman District Farm Business Association

Citizenship Council of Manitoba

Canadian Forestry Institute (Man. Div.)

City of Winnipeg Council (To April 6, 1979)

Community Planning Association of Canada (Man. Div.)

Consumers Assocation of Canada

East-Man. Regional Development Corporation

Entomological Society of Manitoba

Home and School Parent-Teacher Federation of Manitoba

Interlake Development Corporation Inc.

Junior League of Winnipeg

Manitoba Association of Registered Nurses (from Feb. 14, 1980)

Manitoba Association Urban Municipalities

Manitoba Bar Association (from Feb 14, 1980)

Manitoba Environmental Research Committee

Manitoba Chambers of Commerce

Manitoba Farm Bureau

Manitoba Federation of Labour

Manitoba Forestry Association Incorporated

Manitoba Historical Society

Manitoba Indian Brotherhood

Manitoba Institute of Agrologists

Manitoba Library Association

Manitoba Medical Association

Manitoba Naturalists Society

Manitoba Nursery and Landscape Association

Manitoba Parks and Recreation Association

Manitoba Teachers Society

Manitoba Wildlife Federation

Manitoba Women's Institute

Mining Association of Manitoba

National Farmers Union

Norman Regional Development Corporation

Parkland Regional Development Corporation

Pembina Valley Regional Development Corporation

Provincial Council of Women of Manitoba

Town of Selkirk Council

Union Manitoba Municipalities

United Steelworkers of America (Local 6166)

United Steelworkers of America (Local 7106)

University Women's Club of Winnipeg

Winnipeg Labour Council

Zoological Society of Manitoba

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COUNCIL CHAIRMEN

The first organizational meeting of the Council was held on January 28, 1972. At this meeting, various task forces were established to formulate the Council's direction and operation. At the second meeting on November 17, 1972, an Executive was elected with Lloyd Axworthy as Chairman. The election of officers was changed to the Annual Meeting in the spring of 1974. A list of Council Chairman follows:

1972-73	Lloyd Axworthy
1973-74	Lloyd Axworthy (To Dec. 5, 1973)
1973-74	Ken Arenson (From Dec. 5, 1973)
1974-75	Ken Arenson
1975-76	Allen M. Lansdown
1976-77	W.J. Turnock
1977-78	Onno Kremers
1978-79	David Punter
1979-80	Rosemary Malaher

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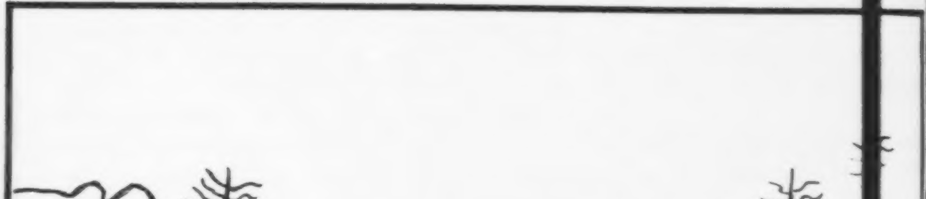
COUNCIL STAFF

J.J. Keleher, M.A. — Executive Secretary
Secretarial Pool — Ms. Barbara Deans, Head



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PUBLICATIONS

Publications are distributed, without charge, upon written request and to those on the mailing list which includes Manitoba public libraries and many Manitoba school libraries. Council publications are listed in *Canadiana* and the Queen's Printer (Manitoba) Monthly Checklist. Publications issued after 1976 are recorded on microfiche in *Microlog*, available from Micromedia Limited, Toronto.

Issued

Annual Report One, 1973, 32 p., 1973 — out of print

Annual Report Two, 1974, 72 p., 1974

Annual Report Three, 1975, 54 p., 1977

Annual Report Four, 1976, 79 p., 1977

Annual Report Five, 1977, 110 p., 1978

Annual Report Six, 1978, 87 p., 1979

Annual Report Seven, 1979, 148 p., 1980

Annual Report Eight, 1980, in Press

Study 1, 1974, 4 p. *Manitoba Environmental Problems and Public Opinion* by J.J. Keleher and Karen Z. Hendin — out of print

Study 2, 1974, 61 p. *Garrison Diversion Project Presentations,* W.G. Leitch and J.J. Keleher, eds. — out of print

Study 3, 1974, 4 p. *Manitoba Environmental Agencies and Activities by* J.J. Keleher — out of print*

Study 4, 1975, 171 p. *Impacts of the Garrison Diversion Unit on Canada* by D.H. Boyd — out of print

Study 5, 1975, 130 p. *Manitoba 2000: Population Size and Distribution,* K. B. Richmond and J.J. Keleher, eds.

Study 6, 1975, 127 p. *Nuclear Energy: Fact and Fantasy,* Ken Arenson, Chairman

Study 7, 1977, 35 p., *The Winnipeg Townscape: A Survey Guide* by H.J. Selwood

Study 8, 1977, 130 p., *Rural Land Use Conflict: Some Solutions,* William Bell, Chairman — out of print

Study 9, 1977, 162 p., *The Energy Issue: Demand and Supply,* W.J. Turnock, Chairman

Study 10, 1978, 145 p., *Manitoba Water Quality Objectives: How far do we go?* Alex Fedoruk, Chairman

Study 11, 1978, 37 p., *Trees and Pesticides: An Environmental Dilemma,* Peter Aitchison, Chairman

Study 12, 1978, 112 p., *Winnipeg 100: Alternative Futures,* Ken Arenson, Chairman

Study 13, 1979, 51 p., *Environmental Education: Hope for the Future,* Rosemary Malaher, Chairman

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* *A revised version of this publication is available (cf. Info, Ser. No. 9, 1976, 27 p.) from the Environmental Management Division of the Department of Mines, Natural Resources and Environment.*

Forthcoming

Parks for Manitoba: Policy and Practice

South Indian Lake and Hydro Development

Red River Flooding: Causes & Solutions

* * *

BRIEFS

This section is a compilation of briefs i.e. resolutions that were prepared by Committees, etc. in response to specific issues or subjects. Only a limited number of copies are prepared. They are not regarded as publications and, although not automatically distributed, are available upon request until the supply is exhausted. Some of them are published in Annual Report.

This list is for the period April 1, 1979 to March 31, 1980. However briefs identified by a **boldface** source citation were prepared in conjunction with the Annual Meeting of May, 1980. They also will be listed in the next Annual Report to provide a correct output for each fiscal year but will then be printed *in italics* to call attention to their "double entry" status.

Regional Chairmen

- R.D. Howard resolution regarding Garrison Diversion Unit.
[*Annual Report Seven ... p. 17*]

Environmental Chemicals Committee

- Brief for Council consideration, April 27, 1979 meeting
[re. Control of Dutch Elm Disease] [W. J. Turnock]
March 29, 1979, 2 p.
[*Annual Report Seven ... p. 24*]
- Brief for Council consideration: Nov. 30, 1979 re
Collection and Transport of Hazardous Chemicals
[D. Muir]
[Annual Report Eight ... p. 20]
- Brief for Council consideration: May 2, 1980
re Management of and Regulations Pertaining to Hazardous Chemicals Wastes. [D. Muir]. 2 p.
[Annual Report Eight ... p. 23]
Brief for Council consideration: May 2, 1980
re. E.M.D. Response to Hazardous Chemicals
[D. Muir], 2 p.
[Annual Report Eight ... p. 24]

E.I.A.R. Committee

- [Brief for Council consideration, April 27, 79 meeting re.]
Proposed Historic Resources Impact Assessment Guidelines [Oscar Mallory]
July, 1978, 27 p.
[*Annual Report Seven ... p. 28*]

Land Use Committee

- Brief to the Honourable A. Brian Ransom ... [re]
The Preservation of Natural Areas in Private Ownership.
... B. Rotoff, June 29, 1979
[*Annual Report Seven ... p. 63*]
- Brief for Council consideration: May 2, 1980.
Re. A review of the final recommendations of the Clean Environment Commission Report on intensive livestock operations in Manitoba.
Colin Holbrow, March 17, 1980, 10 p.
[Annual Report Eight ... p. 33]
- Brief for Council consideration: May 2, 1980
re: The Administration, Allocation, and Control of Water and Land Resources in Manitoba.
Colin Holbrow, April 9, 1980, 15 p.
[Annual Report Eight ... p. 35]

Water and Waste Committee

- Brief for Council consideration: Nov.

MEDIA
PUBLIC
"ACID RAIN ?,
WHAT ACID RAIN ?"

0028

30, 1979
re. Selkirk water supply. A.C. Maniar, Nov. 25, 1979, 4 p.
[Annual Report Eight ... p. 43]
- Brief for Council consideration: Nov. 30, 1979
re. Garrison Diversion Unit Publication A.C. Maniar, Nov. 27, 1979, 3 p.
[Annual Report Eight ... p. 44]
- Brief for Council consideration: Nov. 30, 1979
re. Whiteshell Nuclear Research Establishment, Pinawa
A.C. Maniar, Nov. 25, 1979, 3 p.
[Annual Report Eight ... p. 45]
- Brief for Council consideration: Nov. 30, 1979
re. Timing of Water Quality Hearings.
A.C. Maniar, Nov. 30, 1979, 2 p.
[Annual Report Eight ... p. 47]

Wildlife Committee.

- Brief for Council consideration: April 27, 1979
[re Cattle, Wildlife and Crown Lands] J. Nickels
April 6, 1979, 3 p.
[Annual Report Seven ... p. 72]

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FORUMS AND TALKS

The following event was sponsored by the Council during the fiscal year.
Red River Flooding: Causes and Solutions
Basil Rotoff, Chairman, A. St. Hilaire, Doris Lougheed, J.R. Calton, Lloyd A. Jones, Hans Foerstel, Ness Mudry, E. Kuiper.
Legislative Bldg., Winnipeg, Nov. 30, 1979.

FINANCES

The Council is funded by a legislative appropriation to the Environmental Management Division of the Department of Consumer and Corporate Affairs and Environment. The dollar amounts listed are for "other expenditures" and do not include "salaries". Dash denotes missing information. The cost of administration services, e.g. accounting and secretarial, largely borne by the Division.

FISCAL YEAR	VOTED	EXPENDED	PERCENT
1971/72	—	—	—
1972/73	2,500	—	—
1973/74	18,200	7,400	41
1974/75	17,100	15,000	88
1975/76	15,100	16,200	107
1976/77	13,100	11,700	89
1977/78	16,300	15,132	92
1978/79	16,900	16,621	98
1979/80	16,900	20,432[a]	121

a: Deficit managed by deferring $1912 to 1980/81 accounts and Division paying $1638.

Expenditures — 1979 - 80

Code	Item	Amt. ($)
218	Research	350
226	Guard Service	136
341	Stationery and Printing	2010
346	Publications	5636
348	Typing & Photocopying	472
412	Recording Meetings	777
460	Mileage	614
616	Exhibits	420
618	Advertising	2908
621	Books	183
650	Courier service	55
660	Travel	5601
670	Meals	776
677	Cartoon prizes	425
—	Miscellaneous	69
	TOTAL	20432

RESOLUTIONS — HECLA, 1979

I — Federal/Provincial Relationships

That the Councils should endorse the stated Environmental Protection Service policy to maintain and strengthen interprovincial and international cooperation;

That the Councils should accept the need for federal/provincial interaction and agreement with emphasis on the following jurisdictional areas: Federal — importation, registration, licensing, labelling and manufacture of hazardous products and their interprovincial transport, mediation of trans-boundary disputes; Provincial — manufacture, sale, use and disposal of hazardous materials.

It is understood that any provincial jurisdication has the right to impose more stringent regulations if it so desires.

II — Research and Professional Training

In contrast to classical toxicology, which is the study of the harmful effects of single chemicals on individual and populations of animals under controlled conditions, ecotoxicology is a discipline which studies the harmful effects of toxic agents and complexes of such agents on entire ecosystems.

In order to increase the number of trained toxicologists and ecotoxicologists, the Councils should:

a) urge granting agencies to provide substantially greater funding for training and research in toxicology;
b) urge provincial governments to recognize that toxicology and ecotoxicology are important subjects for advanced study;
c) urge Canadian universities to recognize ecotoxicology as a discipline in its own right, and give appropriate attention to this discipline;
d) urge that priority be given to the establishment of centres for research testing and dissemination of information in the field of ecotoxicology.

III — Public Education

That Councils urge that educational programs on the selection, safe handling use, and disposal of hazardous materials should be given a high priority.

IV — Financing of Long Term Disposal of Hazardous Wastes

That an environmental protection fund should be established, involving th federal and provincial governments and those industries concerned with hazardous wastes, to provide for the financing of hazardous wastes disposal where the originator cannot be identified or can no longer be held responsible.

V — Incentives

That governments should consider appropriate financial incentives and penalties to assure proper evaluation of the environmental consequences of domestically produced and imported toxic substances.

VI — Monitoring of Toxic Substances

That the scope of governmental monitoring of hazardous materials shoul be extended in order to secure adequate baseline data.

VII — Introduction of New Chemicals

That more stringent regulations should be placed on the introduction of new chemicals into the environment, with the burden of proof of their acceptibility in the environment, within specified limits, to be placed on the manufacturers; and that goverments, at the appropriate levels, should develop suitable mechanisms for monitoring company data.

VIII — Environmental Impact Assessment

That environmental impact assessment procedures should be extended to include any government program involving a potential hazardous material.

IX — Master List of Toxic Chemicals

That the federal and provincial governments should consider the desirability of establishing a master list of toxic chemicals, their acceptable concentrations, manufacture, handling and disposal.

X — Review of Legislation by Councils

That Councils should review the present status of legislation in their respective jurisdictions with respect to the following recommendations:

a) that there should be an obligation to specify, by regulation, toxic chemicals and their maximum permissable concentration in the environment;

b) that where this is not yet stated policy, a specific time limit should be established for arriving at such regulations;

c) that maximum concentrations should be established from the most conservative approach possible, given present technology, and that such criteria should be reviewed on a regular basis to ascertain if they can be lowered;

d) that there should be a legal obligation on the provincial control agencies to take immediate action when hazards arise.

XI — Acid Precipitation

Because of the demonstrated ongoing chemical change of Canadian water bodies and vegetation due to long range airborne pollution, the Councils should urge that federal and provincial governments, acting in concert, take immediate steps to determine the magnitude of the problems and means to ameliorate the situation on a national and international basis.

XII — Freedom of Information

It was agreed that Councils should consider the federal council's recommendations on toxicity in general, and in particular the endorsement of recommendation A-7 on freedom of information. Recommendation A-7 states: "To facilitate research on and understanding of ecotoxicity as widely as possible, we recommend that all toxicological and analytical data held by the federal government, or submitted to it by industry to support the use of a chemical, be in the public domain. This freedom of access should also apply to statistics on amounts in use".

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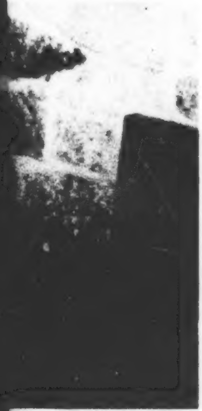
Environmental Councils activities — Hecla, 1979



W.L. LOCKHART — PESTICIDES IN WATER.

Pesticides are frequently found in the surface waters of western Canada, even though uses of those same pesticides do not include direct applications to water. Much effort has gone into measuring and documenting the concentrations of a variety of pesticides in water and in fish and in other environmental samples, although it is seldom clear how these measurements relate to biological risk.

Toxicology, particularly with aquatic organisms, is a relatively undeveloped scientific area. Experimental toxicity tests usually relate the concentration of a pesticide in the water to the production of test animals killed over an exposure period of 96 hours. The concentration lethal to 50% (LC_{50}) of the animals (or plants) is the measurement most frequently used to compare one pesticide with another, and these values may vary from a few ppb for very toxic compounds to several thousand ppb for essentially non-toxic ones. Responses vary widely from species to species, and the slopes of dosage-mortality lines may be steep or shallow.

Some of the questions surrounding introduction of a pesticide into water were illustrated from our own experience with blackfly larvicides. Monitoring fish after an Athabasca river treatment indicated residues in flathead chub livers up to 9 ppm; experimental poisoning of fish resulted in a state of morbidity at liver concentrations varying from about 6 to about 60 ppm, depending upon species. These observations suggested that river treatment had a relatively small margin of safety, probably less than 10-fold, with regard to risk of poisoning fish. Drift samples indicated that large numbers of invertebrate animals were induced to detach from the river bed and to begin drifting with the current. Biochemical measurements of fish serum protein and lipid indicated a condition consistent with starvation, although a direct cause/effect relationship between treatment and fish starvation could be rigorously proven.

Many recently developed pesticides are readily decomposed in water by such factors as sunlight and microorganisms. Even within fish the parent pesticide structure may "disappear" and one or more new structures may be formed. This makes it more difficult to associate biological damage with exposure to some chemical since the chemical may be gone before the damage is measurable. It is even more difficult to take the next necessary step from individual to population responses.

It seems that future efforts should focus more upon finding satisfactory ways to interpret chemical measurements of pesticide concentrations. The literature already contains many thousands of measurements of residues of pesticides and their breakdown products but we have few satisfactory ways to express biological risks to be associated with those measurements. Another area which seems overdue for toxicological attention is that of multiple toxicity where organisms experience exposures to several toxicants at the same time.

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Board of Directors, 1979–80 *back: R. D. Howard, D. Muir, J. B. Nickels, J. F. Palamarchuk, A. Maniar, J. J. Keleher, C. Sundervic, C. Holbrow, D. Punter*
front: B. Rotoff, B. Pawlicki, R. Malaher, D. Ringland.

G.A. GERKE — RESPONSIBLE HAZARDOUS WASTE MANAGEMENT IN CANADA

Kinetic Contaminants Canada Limited has been formed to provide a much needed service for the disposal of hazardous and toxic wastes in Canada. There are no adequate facilities in Canada for destruction, detoxification or disposal of these wastes. This results in the use of inadequate facilities or indiscriminate discharge of hazardous wastes onto land or into surface waters.

Kinetic Contaminants Canada Limited proposes to provide a fully integrated treatment and disposal facility for hazardous wastes. The facility is currently being designed and will be in operation by 1981. The facility will be supported by a collection, storage and transportation system which will provide the highest possible measure of protection for the public and the environment.

The production, distribution and use of large volumes of chemicals for the support of industrialized society results in the discharge to the environment of many hazardous wastes which are highly toxic, corrosive or reactive. Conservative estimates indicate that 5 to 15 kilogram/capita of hazardous wastes are produced in Canada by a diverse group of generators including manufacturing industries, service industries, utilities, government departments and private households. Hazardous wastes consist of a variety of compounds in many forms. They include acids or alkalis containing heavy metals, and oil and solvent mixtures which contain chlorinated hydrocarbons. Some hazardous wastes take the form of sludges and contaminated soil and sand.

Kinetic Contaminants Canada Limited will provide a complete service for the waste generator, assuming full responsibility for the proper handling, transportation and destruction of wastes from the point of pickup. The proposed treatment facility will be located in Alberta and will accept all hazardous materials. Waste collection stations will be located in other provinces throughout Canada. The main facility will provide treatment of toxic wastes using proven incineration and physical-chemical processes. Most hazardous materials can be destroyed or detoxified using established technology. Facilities in Germany, France, Denmark and The United Kingdom have been operating successfully for several years.

The basic components of the hazardous waste disposal plant will be provided with full support services including an advanced laboratory, a highly skilled spill clean-up unit and a research and development group to continually expand the capability of the facility. Shipping, packaging, labelling and record keeping will exceed the most stringent regulations and wastes will at all times be under the control of highly qualified chemists.

The need for these services is motivated by increased public awareness and concern about direct and indirect costs and consequences to human health and environmental well-being arising from the indiscriminate discharge or disposal of toxic or dangerous wastes to surface waters or to landfills. The design of the proposed treatment facility is based on the philosophy that responsible management of industrial waste is beneficial to the environment and human beings alike, while indiscriminate disposal of waste inevitably leads to environmental damage and threatens the health of people.

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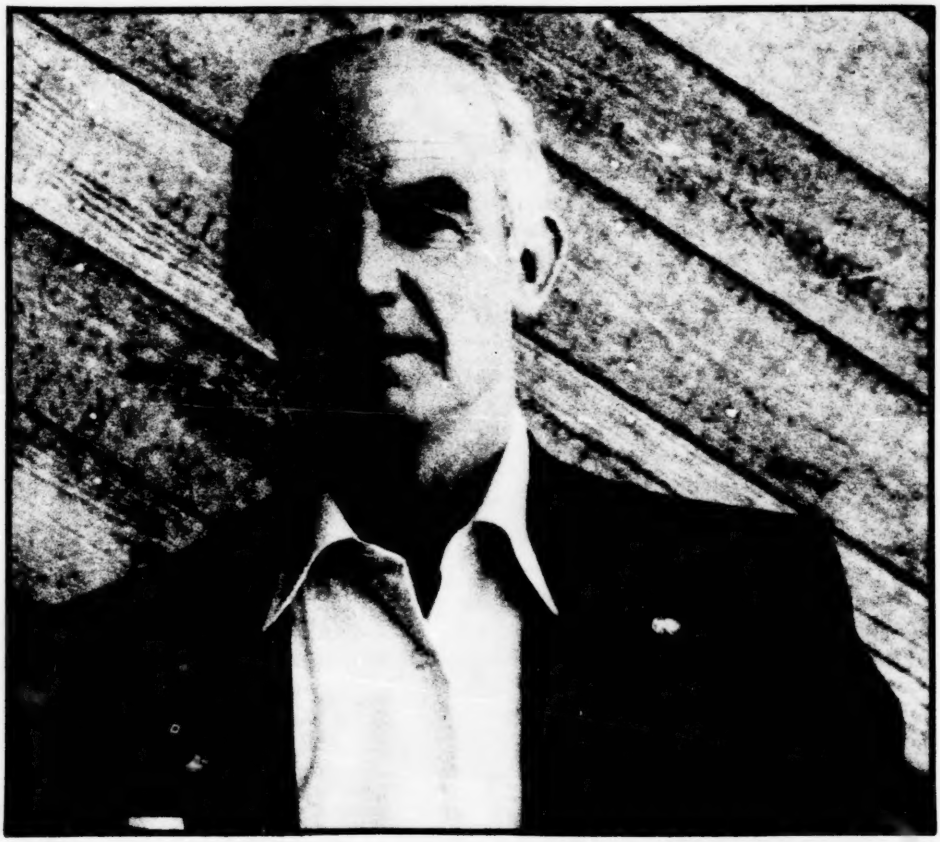
NADIAN ENVIRONMENT
WEEK
CANADIAN
WILDLIFE
SERVICE
ENVIRONMENTAL
MANAGEMENT
DIVISION
AVAILABLE
PAMPHLETS

1980 Canadian Environment Week display — Winnipeg Airport.

JOHN ASHTON — HAZARDOUS MATERIALS CONTROL PROGRAM AT INCO, THOMPSON.



A program has been established to identify and control the use of hazardous materials at Inco Metals Company's operations in Thompson.

The program involves:

a) Obtaining information of the chemical composition and chemical and physical properties of materials and the precautions necessary for safe handling and use.
b) Evaluation of the information to ensure that hazards are properly identified.
c) Compiling a register of all hazardous materials, describing the type and degree of hazard and the correct handling techniques. This register is available to all employees who work with these materials.
d) Controlling the purchase of new materials.
e) Evaluating substitute materials in order to reduce hazards existing with materials presently in use.
f) Reviewing the techniques employed by the user to ensure that they meet the recommendations.
g) Monitoring for personal exposures.

* * *

ROSS H. HALL — LEGAL AND POLITICAL IMPLICATIONS OF HAZARDOUS MATERIALS USE

Issues:

To define a waste product, presumes we know something about it. About 100,000 chemicals are produced commercially — only about 1/10 of them have any toxicological data. How do you then judge the other 90,000? Toxicology is a very underdeveloped science. It lacks the methods to ascertain accurately the toxicity of chemicals. In addition, there are few trained toxicologists — about 100 in Canada. Laboratory toxicology deals with one chemical at a time. Environmental contaminants results from 100,000 chemicals or more all acting simultaneously.

Resolution:

Because we did not know much about the toxicity of most chemicals, we should assume that all chemicals are hazardous. Policy should be aimed towards progressive reduction of environmental contamination to zero. Environmental contamination impacts, seriously on health/people. People should have the right to pursue the basic attributes of life — breathing, drinking, eating — without being poisoned in the process. The environment also has an intrinsic right regardless of whether people are involved, not to be poisoned. Manufacturers have responsibility to show use of chemical is not hazardous. Further no chemical will be manufactured until it can be disposed. Strong incentives to comply arise, for example: if people can sue for damages incurred when exposed to a chemical.

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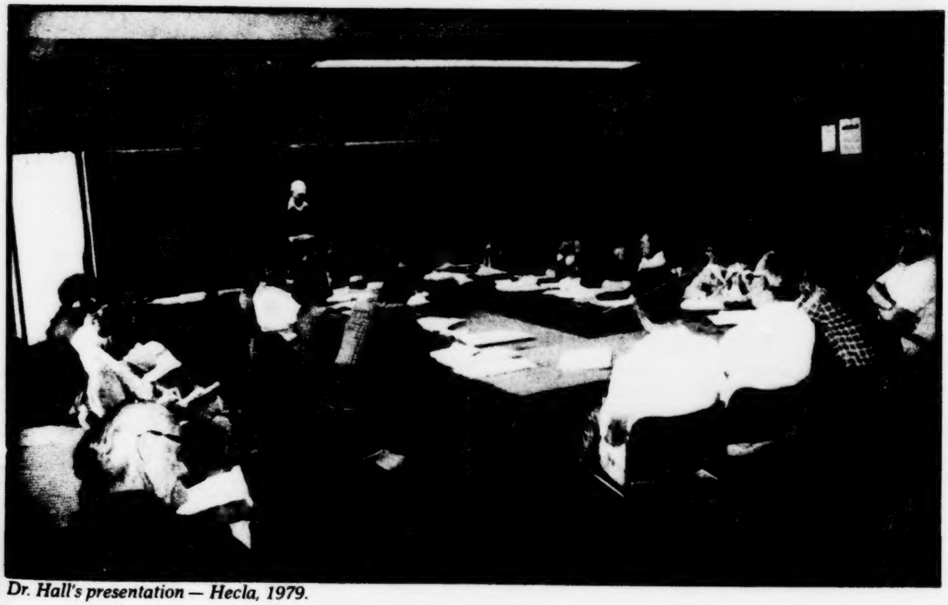

Dr. Hall's presentation — Hecla, 1979.

L.M. WEDEPOHL — ECONOMIC AND ENVIRONMENTAL FACTORS OF HYDROELECTRIC SCHEMES.

Of all the sources of energy available to man, hydro-electricity is the best. Not only is it almost totally non-polluting, but in many cases it may be used to advantage to improve the environment. In many countries where large developments are taking place, there is fierce competition amongst communities to be the first to have a dam built because it brings irrigation, commercial fishing and recreation to the area. Examples of this are Columbia river in the States and Canada, Vaal-Harts in South Africa and Snowy Mountains in Australia.

Hydro-electric developments are more costly than thermal because of the large amount of civil works required and the large transmission distances. To offset this fuel cost (water rental) is negligible compared with fossil fuel. Furthermore they are relatively long lived, typically 70 years to write off rather than 40 years for thermal. With inflation and declining fossil fuel reserves, energy costs of a hydro development show a substantial decline in relative cost as the years go by.

Environmentally, there are objections to hydro-electric development. Some flooding inevitably occurs and there may be problems of bank erosion. By careful planning and management however the damage may be kept to an acceptable minimum by a suitable choice of sites and the numer of stations required to harness the energy. To do this well requires the positive cooperation of government, utility, environmental councils and other interested agencies and people.

A significant factor in the development of hydro-electric schemes was the paternalistic attitude of many utilities until the middle to late 1960's. Many confrontations and mistakes could have been avoided if there had been better communications. Through the 1970's a much better system started to evolve and, while there is room for considerable improvement, there is much better communications and hence a much better understanding of the very great advantage of hydro-electricity. As the fossil fuel shortage intensifies, those places with an abundance of hydro energy will lead to very fortunate and happy societies.

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Advisory Councils banquet, Hecla, 1979.

G. SPAFFORD — INTERPROVINCIAL POWER GRIDS AND ENVIRONMENTAL CONSEQUENCES.

The environmental consequences of expanded interconnection of electric utilities impinge on the following components of development: Electric transmission lines, Fuel consumption and coal mining, Operating pattern of thermal electric plants, Operating pattern of hydro-electric plants and Sequence of development and development component size.

In keeping with the theme for the conference session this paper will deal only with those environmental consequences related to hydro-electric development and operation. Further, it will be confined to describing the physical changes in operation, scale and configuration that may be of environmental significance. Much of the material presented is taken from a paper prepared for the Second International Water Resources Congress of December, 1975.

Four of Canada's major electrical utilities have hydro-electric generating plants as their principal supply. Others have systems at one time principally supplied by hydro but, which, as hydro sites were utilized, have turned to thermally generated electric energy to meet expanding demand. In these latter systems the role of the hydro-electric plants of the system has changed over time with a consequent change in their use and mode of operation. Interconnection and integration of those systems supplied principally from hydro with predominantly thermal systems will show similar changes in their use and mode of operation.

In general terms interconnection and integration of operation of two or more provincial utilities will have the following consequences:

Financial — Reduced installed capacity due to improved reliability, load diversity and reduced hydro over capacity. Improved utilization of hydro energy and reduced fuel consumption.

Physical — Changed pattern of hydro generation, Changed pattern of fuel consumption, Changed location and scale of transmissions and Changed capacity expansion sequence.

For all of these consequences to apply, the integrated system would include both thermal electric and hydro-electric sources. In general terms integration of previously isolated hydro-electric sources with thermal electric supplies will permit relaxation of a requirement to retain water stored in hydro reservoirs against the possibility of drought. Instead it will become expedient to hold some storage empty to avoid spilling of energy due to floods. Simplified examination shows that this mode of operation may provide up to 25 percent increase in the average hydro-electric energy utilized. A corresponding reduction in generation by the integrated thermal electric sources would be realized with a proportional saving in fuel consumption. Figures 1 and 2 illustrate two examples of the comparable utilized hydro energy in the two operating modes. [Author's Figures not included — see Proceedings — ed.] In these figures the isolated case is referred to as the "initial role" and the integrated case as the "terminal role".

The change from the initial role to the terminal role will result in marked changes in the pattern over time of hydro-electric plant discharge and storage levels. These changes for the classic initial role and terminal role are illustrated for two examples as flow and storage duration curves on Figures 3, 4, 5 and 6. Also shown for comparison on Figures 3 and 4 are the natural streamflows at the hydro-electric sites. A hydro-electric storage reservoir planned specifically to fill the terminal role (i.e. for integration with appreciable thermal electric capacity) would require less storage capacity than if it had been designed for the initial role or an isolated hydro supplied system. As well as changing the economic weight attached to storage, role to be filled will effect the economics of the hydro-electric plant capacity.

The foregoing is very general and is intended to show the trends in hydro-electric use and operation caused by integration with thermal electric supplies. In practice many stages and variation on these influences would take place as a combined system was initiated and grew.

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R.W. NEWBURY — EFFECTS OF HYDRO DEVELOPMENT ON RIVERS

Evaporation from the oceans, precipitation on land masses and streamflow back to the oceans, the hydrologic cycle, is driven by the excess of solar energy received at the equator as compared to the polar regions of the earth. A small portion of the sun's energy can be captured readily by man from the potential energy of the water when it is elevated from the ocean level to the height of the land masses. The potential energy is normally expended as heat from the friction between the flowing water and the land surface as the streams and rivers descend to the ocean. By slowing the flow with a dam in the channel, the frictional losses are decreased in the upstream reach of the river affected by the dam. The potential energy that would have been expended in that reach can now be captured at the dam by releasing the water through a tube to drive a propeller and a generator. The power available is the product of the flow'(cu. ft/sec.), and the fall in the reach or after the dam is built, the drop at the dam (ft.), divided by 11.8 x 10^3 expressed as megawatts (Mw).

Using this simple formula, the hydro-electric potential of southern Canada was easily identified. By the 1970's over 265 hydro-electric projects were built to capture energy on 200 rivers and streams. Eighty dams on 53 rivers have a generating capacity in excess of 100 Mw. The largest project, Churchill Falls in Labrador, captures over 5000 Mw at a single site.

Most of the remaining hydro-electric potential in Canada lies in the North. In the last two decades large multi-dam developments have been started on the rivers of northern Manitoba and Quebec. The northern projects differ from those of the South in several important ways:

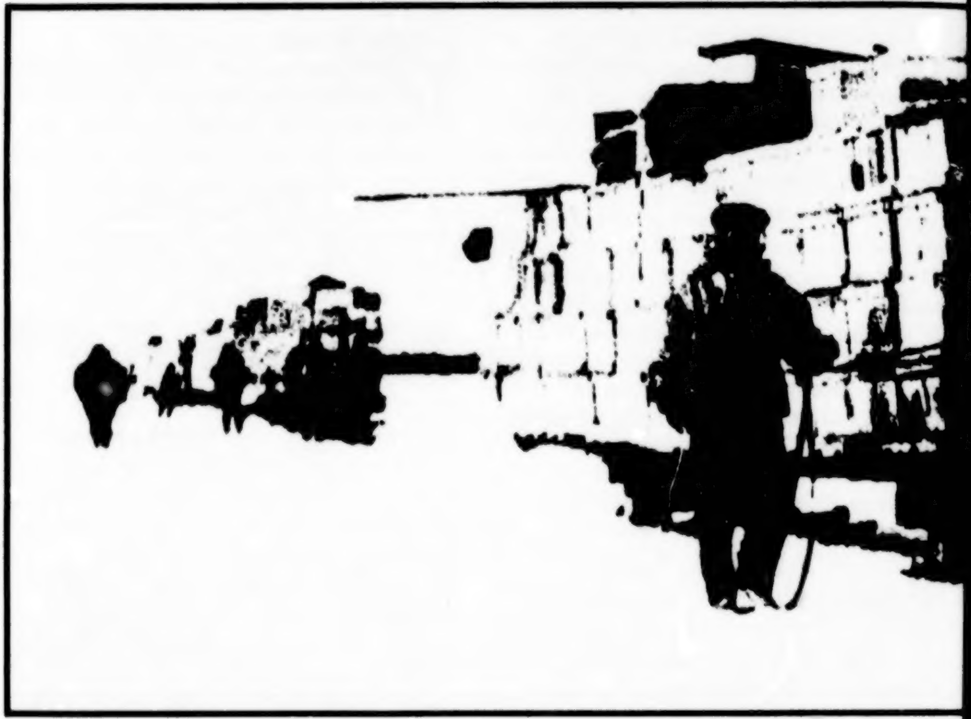
(1) The projects require massive long distance transmission facilities to move the power from the remote sites to the southern market. To bear the added costs of transmission, the efficiency in generating power is increased by storing and releasing the rivers flow in accordance with the power demand. In addition, the flows are frequently augmented by collecting water from adjacent drainage basins through river diversions.

(2) The projects occur in a sparsely inhabited region of Canada with little competitive resource development. They are all-inclusive and frequently all-exclusive to the traditional fishing and trapping uses of the rivers by native people.

(3) The projects frequently require new and experimental design solutions because of their size, the complexity of combining river systems, and the severe climatic conditions under which they must operate. The Nelson River development in northern Manitoba for example, has created the first large impoundment in North America in the widespread permafrost zone.

The environmental implications of altering entire hydro-logic regimes in the north have limited counterparts in southern hydro-electric experience. The processes causing readjustment of the rivers must be addressed from first principles. Under natural conditions, the potential energy of the river was expended by the fluvial processes that carve and transport sediment from the myriad of channels that comprise a river system. At any point in the system, the size and form of river channel reflect the quantity of water conducted, the geological materials of the basin, and the length of time that this particular combination of water and land has been in existence. The final form that a river will attain is unknown for the balance between the creation of land masses through crustal movements and the removal of the land surface materials by river erosion occurs over geological epochs that far exceed the record of mans observations. In the short span of our society in North America, we have observed only a slow rate of change of river characteristics as they react to residual crustal movements of the ice ages. We must now anticipate and seek to avoid unstable and rapidly changing characteristics as rivers react to the manipulations of man in securing hydro-electric power.

The degree of instability or disruption caused by hydro-electric developments can be related to alterations in the distribution and location of the rivers potential energy. The Nelson River project in northern Manitoba is illustrative of a highly disruptive design. In this multiple site development, hydro-electric dams have been built in close proximity on the Lower Nelson River. To augment the power generated at each dam, the Churchill River, which ran parallel to the Nelson 150 km to the north, was diverted into the Nelson in 1976 through 300 km of small tributary valleys. The diversion was accomplished by raising the level of a main stem lake on the Churchill (Southern Indian) until the water flowed through a new outlet to the south into the Rat and Burntwood River valleys. The distribution of potential energy in the river systems before and after the diversion has been calculated. For a net gain in power generation of 423 Mw at the Nelson River plants, 4252 Mw of energy were shifted in an environment established



following deglaciation of the region 7000 years ago.

In spite of considerable opposition to the diversion component of the Nelson River development, this project alternative was adopted as being the "most economic". In 1976, the waves on Southern Indian Lake began to carve new shorelines in the flooded periphery of the lake and the diverted flows began to form a new Lower Churchill River in the Rat and Burntwood valleys. These are not major changes in the evolution of the river basins as they have been impounded and shifted by glaciation and crustal movements many times in their geological history. In a few centuries, the characteristics of the lakes and rivers will be similar to those we discovered 200 years ago during the fur trade era. For a few centuries however, the rate of change and the instability caused by such major, uncontrollable shifts in hydraulic energy make this environment inhospitable to man.

Historically, the loss of a niche for man in the environment has been the traditional legacy of single-purpose, poorly designed and uncontrollably unstable projects. In the Tigris, Nile and Indus valleys, whole civilizations have collapsed as the clumsily manipulated rivers changed from providers, to uncontrollable consumers of the rare combinations of water and land that are suitable for human existence. River environments inherited by this society in North America are limited in supply and will continue to diminish until hydroelectric and other hydraulic projects are designed to minimize instability and our society has developed a sense of survival in an ancient inherited landscape.

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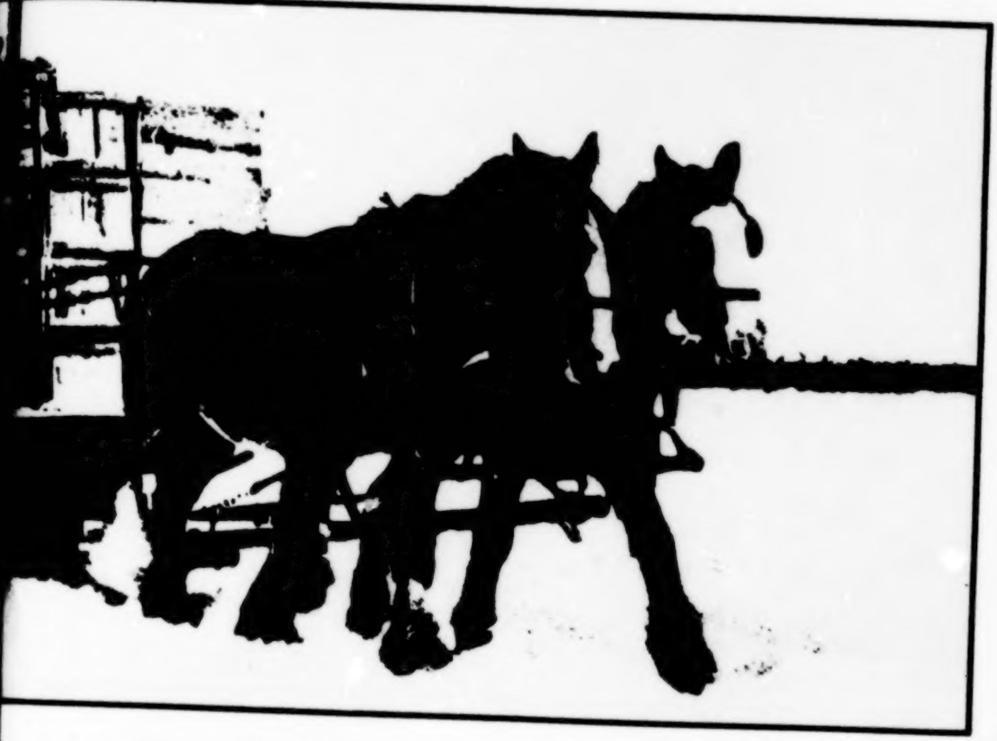

ILLUSTRATIONS

The illustrations in this Annual Report focus on the Hecla area to commemorate the Council's first sponsorship of a Federal/Provincial Advisory Councils meeting which took place at the Gull Harbour Hotel in June, 1979. Source of the photographs varies. We are indebted to such Man. government agencies as the Photographic Services Section, Tourism Branch or Dept. of Agriculture for many of them. Others were provided by Eclipse 3 Design Ltd., Rod McCharles or the editor. The Red River Book Store donated the Garrison poster. The cover design employs the conference logo which was created by Loren Keleher.

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COLOPHON

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